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US-09-864-761-39237
                                                                                          PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILLING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILLING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: US 02/236,359
PRIOR APPLICATION NUMBER: DCT/US01/00666
PRIOR APPLICATION NUMBER: DCT/US01/00667
PRIOR APPLICATION NUMBER: DCT/US01/00667
PRIOR FILLING DATE: 2001-01-30
PRIOR FILLING DATE: 2001-01-30
PRIOR FILLING DATE: 2001-01-30
PRIOR FILLING DATE: 2001-01-30
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                                                                                                                                                                                                                                                                                                                           Sequence 39237, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                           APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Accomica-x-1
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR FILING DATE: 2000-02-04
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OR EILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/USO1/00669
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/USO1/00665
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/USO1/00668
OR APPLICATION NUMBER: PCT/USO1/00668
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/USO1/00663
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/USO1/00663
OR FILING DATE: 2001-01-30
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US-09-794-925-14
US-09-681-442-12
US-09-681-442-12
US-09-681-442-14
US-09-681-442-14
US-09-794-927-18
US-09-794-927-18
US-09-794-927-18
US-09-794-927-18
US-09-794-743-16
US-09-794-743-16
US-09-794-743-20
US-09-794-743-20
US-09-794-743-20
US-09-794-748-20
US-09-794-925-16
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Scoring table: Sequence: Title:

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Perfect score:

US-09-674-913A-2

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Run on:

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protein search, using sw model

GenCore version 5.1.3
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October 29, 2002, 13:59:28;

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Sequence 10, Appl Sequence 12, Appl	Sequence 14, Appl	Sequence 12, Appl	Sequence 10, Appl	Sequence 14, Appl	•	•	Sequence 38, Appl	Sequence 34546, A	Sequence 37938, A	Sequence 5083, Ap	Sequence 11860, A	Sequence 34158, A	Sequence 208, App	Sequence 35901, A	Sequence 1493, Ap	Sequence 11988, A	Sequence 39237, A	Description

APPLICATION NUMBER: PCT/US01/00662 FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00661

FILING DATE: 2001-01-30

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PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
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                                                                SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 11988
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OTHER INFORMATION: E
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                                                                                                                                                                    PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR FILING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Identification of Essential Genes in TITLE OF INVENTION: Prokaryotes FILE REFERENCE: ELITRA.011A CURRENT APPLICATION NUMBER: US/09/815,242 CURRENT FILING DATE: 2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Haselbeck,
                                                                                                                             PRIOR APPLICATION NUMBER: 60/269,308 PRIOR FILING DATE: 2001-02-16
                                                                                                       NUMBER OF SEQ ID NOS: 14110
                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/242,578 PRIOR FILING DATE: 2000-10-23
                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/191,078 PRIOR FILING DATE: 2000-03-21
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ORGANISM: Pseudomonas aeruginosa
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Zyskind, Judith W.
Wall, Daniel
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IN HEART, SIGNAL = 2.3
IN BRAIN, SIGNAL = 2.3
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IN HELA, SIGNAL =
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IN FETAL LIVER, SIGNAL = 2.3
IN BONE MARROW, SIGNAL = 2.5
IN HELA, SIGNAL = 2.4
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, OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids us\text{-}09\text{-}925\text{-}300\text{-}1493
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APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
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                                                                                                                                                                                                                                                                                                                                                         Sequence 35901, Application US/09864761 Patent No. US20020048763A1
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Best Local :
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                                        APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
TILE REFERENCE: Aeomica-X-1
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/925,300 CURRENT FILLING DATE: 2001-08-10 PRIOR APPLICATION NUMBER: PCT/US00/05988 PRIOR FILING DATE: 2000-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/124,270 PRIOR FILING DATE: 1999-03-12 NUMBER OF SEQ ID NOS: 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Craig Rosen, APPLICANT: Steve Ruben
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LOCATION: (29)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46 IEKSWRELVPGHKEMSQ 62
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APPLICATION NUMBER: US 09/632,366 FILING DATE: 2000-08-03
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11; Conserv
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Pred. No.
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Pred. No. 23;
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FILING DATE:

APPLICATION NUMBER: PCT/US01/00666 APPLICATION NUMBER: US 60/236,359 APPLICATION NUMBER: GB 24263.6 FILING DATE: 2000-10-04

2001-01-30 2000-09-27

APPLICATION NUMBER:

60/189,918

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RESULT 5
US-09-811-284-208
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S-09-864-761-35901
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APPLICANT: Vogeli, Gabriel
TITLE OF INVENTION: No. US20020058306Alel G
FILE REFERENCE: 00167US1
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SEQ ID NO 35901
LENGTH: 102
                                                                                                                                                                                                                                                                                                               Sequence 208, Application US/09811284 Patent No. US20020058306A1
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Best Local 9
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                     CURRENT APPLICATION NUMBER: US/09/811,284
CURRENT FILING DATE: 2001-03-16
PRIOR APPLICATION NUMBER: 60/189,783
PRIOR FILING DATE: 2000-03-16
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PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
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APPLICATION NUMBER
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APPLICATION NUMBER: PCT/US01/00668
FILING DATE: 2001-01-30
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FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
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FILING DATE: 2001-01-30
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APPLICATION NUMBER: PCT/US01/00664
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APPLICATION NUMBER: 60/189,907
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NITMBER: US 09/608,408
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37.5%;
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ED IN LUNG, SIGNAL = 1.7
ED IN ADULT LIVER, SIGNAL = 1.4
ED IN PLACENTA, SIGNAL = 0.96
ED IN HEART, SIGNAL = 0.98
ED IN HELA, SIGNAL = 2.1
ED IN HELA, SIGNAL = 2.1
ED IN HBLIO, SIGNAL = 1.2
AN HIT: BE792924.1, EVALUE 1.40e-01
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Query Match
Best Local Similarity
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                                                  PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
PRIOR FILING DATE: 2000-10-04
PRIOR EILING DATE: 2000-09-27
PRIOR EILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR FILING DATE: 2001-01-30
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00664
PRIOR APPLICATION NUMBER: PCT/US01/00664
PRIOR FILING DATE: 2001-01-30
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SEQ ID NO 208
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APPLICANT:
APPLICANT:
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PRIOR
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PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-08-03
PRIOR FILING DATE: 2000-08-03
PRIOR FILING DATE: 2000-08-03
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CURRENT APPLICATION NUMBER: US/09/864,761
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NUMBER OF SEQ ID NOS: 258
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FILING DATE: 2000-03-29
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FILING DATE: 2000-03-29
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                                    APPLICATION NUMBER: PCT/US01/00669
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: 2001-01-30
NUMBER: PCT/US01/0066
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l, David K.
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PRIOR APPLICATION NUMBER: PCT/US01/00668 PRIOR FILING DATE: 2001-01-30

FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00662

APPLICATION NUMBER: PCT/US01/00663

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Best Local
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SEQ ID NO 34158
LENGTH: 44
                                                                          CURRENT APPLICATION NUMBER: US/09/815,242 CURRENT FILING DATE: 2001-03-21 PRIOR APPLICATION NUMBER: 60/191,078 PRIOR FILING DATE: 2000-03-21 PRIOR APPLICATION NUMBER: 60/206,848 PRIOR FILING DATE: 2000-05-23 PRIOR FILING DATE: 2000-05-23
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                                                                                                                                                                                                       APPLICANT: Xu, H. Howard TITLE OF INVENTION: Identification of Essential Genes TITLE OF INVENTION: Prokaryotes FILE REFERENCE: ELITRA.011A
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PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
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APPLICATION NUMBER: PCT/US01/00661
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00670
FILING DATE: 2001-01-30
               APPLICATION NUMBER: 60/207,727
FILING DATE: 2000-05-26
APPLICATION NUMBER: 60/242,578
FILING DATE:
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APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-06-30
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                                                                                                                                                                                                                                                                                        Carr, Grant J.
Yamamoto, Robert T.
                                                                                                                                                                                                                                                                                                                                  Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                     Wall, Daniel
                                                                                                                                                                                                                                                                                                                                                                           Ohlsen, Kari L.
Zyskind, Judith W.
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DN: EXPRESSED IN HELA, SIGNAL = 2.6

DN: EXPRESSED IN ADULT LIVER, SIGNAL = 2.1

DN: EXPRESSED IN BRAIN, SIGNAL = 1.8

DN: EXPRESSED IN HEART, SIGNAL = 1.9

DN: EXPRESSED IN HEART, SIGNAL = 2.5

DN: EXPRESSED IN LUNG, SIGNAL = 3.

DN: EXPRESSED IN HELACENTA, SIGNAL = 3.

DN: EXPRESSED IN HELACENTA, SIGNAL = 3.1

DN: EXPRESSED IN HELACON, SIGNAL = 2.4

DN: EXPRESSED IN HELACON, SIGNAL = 2.4

DN: EXPRESSED IN HELACON, SIGNAL = 3.5

DN: EXPRESSED IN HELACON, SIGNAL = 3.5
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Pred. No. 7.2;
1; Mismatches
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RESULT

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                                                                                                                                                                         SOFTWARE: FastSEQ
SEQ ID NO 5083
LENGTH: 327
                                                              Matches
                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL
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LENGTH: 286
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Best Local
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CURRENT FILLING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITRA.011A
                                                                                                                                                                                                                          PRIOR FILING DATE: 200 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/242,578 PRIOR FILING DATE: 2000-10-23
                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
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                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/269,308
                                                                                                                                                                                                                                                                         PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/257,931
                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2000-11-27
                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/253,625
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SOFTWARE: FastSEQ for Windows Version
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PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: 60/269,308
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PRIOR FILING DATE: 2000-11-27
                                                                                                                                                              LENGTH: 3
TYPE: PRT
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                                                                                                                                           ORGANISM: Pseudomonas aeruginosa
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48
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                              1 RLEAKHRENVPGHERMGR 1.8
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                                                            Similarity
8; Conserv
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Zyskind, Judith W.
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                                                              Conservative
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53.8%;
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                                                                           Score 42;
Pred. No.
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Pred. No.
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61;
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                                                                                            Length 327;
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;. OTHER INFORMATION US-09-864-761-37938
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                                                                                                                                                                                                                                     OTHER INFORMATION: MAP TO AC005074.1
OTHER INFORMATION: EXPRESSED IN HELA, I OTHER INFORMATION: EXPRESSED IN HELA, I OTHER INFORMATION: EXPRESSED IN BT474, OTHER INFORMATION: EXPRESSED IN BRAIN, OTHER INFORMATION: EXPRESSED IN LUNG, I OTHER INFORMATION: EXPRESSED IN PLACENT OTHER INFORMATION: EXPRESSED IN PLACENT OTHER INFORMATION: EXPRESSED IN HEART, OTHER INFORMATI
         Best Local
Matches ]
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APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Aeomica-X-1
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TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2000-05 20 APPLICATION NUMBER: US 0
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FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00668
FILING DATE: 2001-01-30
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FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00667
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APPLICATION NUMBER: PCT/US01/00664
FILING DATE: 2001-01-30
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              . Similarity
10; Conserv
              Conservative
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2000-09-21
NUMBER: US 09/608,408
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WUMBER: US 09/632,366
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2000-02-04
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ED IN BT474, SIGNAL = 2.5
ED IN BT474, SIGNAL = 2.8
ED IN BRAIN, SIGNAL = 1.1
ED IN LONG, SIGNAL = 2.9
ED IN BONE MARROW, SIGNAL = 0.93
ED IN PLACENTA, SIGNAL = 0.93
ED IN PLACENTA, SIGNAL = 1.3
ED IN HBLAIO, SIGNAL = 1.3
ED IN HBLA
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Score 42; DB 10;
Pred. No. 1.1e+02;
5; Mismatches 7
                                                                                         Length 560;
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US-09-864-761-34546; Sequence 34546, Application; Patent No. US20020048763A1
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; SEQ ID NO 34546
; LENGTH: 572
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PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
PRIOR FILING DATE: 2000-10-04
  OTHER INFORMATION: DOTHER INFORMATION: EOTHER INFORMATION: E
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APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
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                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE:
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CURRENT FILING DATE: 2001-05-23
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                                                                                                                                                                                                 ORGANISM: Homo sapiens FEATURE:
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Then, Wensheng
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MAP TO ACOO5089.2
EXPRESSED IN PLACEN
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IN BT474, SIGNAL = 5.4
IN BONE MARROW, SIGNAL = 5.6
IN HBL100, SIGNAL = 5.6
IN FETAL LIVER, SIGNAL = 3.1
IN LUNG, SIGNAL = 3.1
IN HELA, SIGNAL = 4
IN ADULT LIVER, SIGNAL = 2
IN ADULT LIVER, SIGNAL = 2
IN BRAIN, SIGNAL = 3.1
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                                                                                                                                                          PLACENTA, SIGNAL
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; OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 3.7; OTHER INFORMATION: SWISSPROT HIT: P53935, EVALUE 2.00e-03; OTHER INFORMATION: EST_HUMAN HIT: AW976211.1, EVALUE 2.00e-91 US-09-864-761-34546
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US-09-810-264-38
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                                                                                                                               APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SE
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DAYE: 2001-02-27
CURRENT FILING DAYE: 09/416,901
PRIOR APPLICATION NUMBER: 09/416,901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 43
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 38
LENGTH: 583
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APPLICANT:
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-09-794-927-10
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CURRENT FILING DATE: 2001-03-16
PRIOR APPLICATION NUMBER: US 60/190,467
PRIOR FILING DATE: 2000-03-17
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TITLE OF INVENTION: WRKY Transcription Factors and Methods
TITLE OF INVENTION: of Use
FILE REFERENCE: 1183
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APPLICANT: Famodu, Omolayo O.
APPLICANT: Hu, Xu
APPLICANT: Lu, Guihua
                                  PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/2
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/2
PRIOR FILING DATE: 1999-09-23
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APPLICATION NUMBER: FILING DATE: 1999-(
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Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                    Gurney, Mark E
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38.1%;
  1999-09-23
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                    PCT/US99/20881
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; PRIOR FILING DATE: 1998; NUMBER OF SEQ ID NOS: 73; SOFTWARE: Patentin Ver.; SEQ ID NO 10; LENCTH: 695; TYPE: PRT; ORGANISM: Homo sapiens US-09-794-927-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR PRIOR DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR APPLICATION NUMBER: 60/101,594
                                                                                                                        GENERAL INFORMATION:
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NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn V
SEQ ID NO 12
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APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALSH
TITLE OF INVENTION: USES
TITLE OF INVENTION: THERE
                                                                                                                                          Sequence 14, Application US/09794927 Patent No. US20010016324A1
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APPLICANT: Yan, Riv
TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                     Bienkowski, Michael J.
Heinrikson, Robert L.
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Heinrikson, Robert L.
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                                  Parodi, Luis A.
Yan, Riqiang
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                     ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
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1; Mismatches
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Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                         1.4e+02;
                                                                                                                                                                                                                                                                                                                                                           DB 10;
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APPLICANY: Yan, Ridiang
TITLE OF INVENTION: ALEHEIMER'S DISEASE SEC
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/5280DE
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US/99/20881
PRIOR FILING DATE: 1999-09-24
NUMBER OF SEQ ID NOS: 73
SOCTWARRE: Patentin Ver. 2.0
SEQ ID NO 10
LENGTH: 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
PRIOR FILING DATE: 199
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                                                                                                                                                                                                                                                                                                                                                            ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-795-847-10
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US-09-795-847-10
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Best Local Similarity 80.0%;
Matches 8; Conservative
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                                                                                                                                                                  Query Match 30.0%;
Best Local Similarity 80.0%;
Matches 8; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     322 RLEAKHRERM 331
322 RLEAKHRERM 331
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Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                      Score 42; DB 10; Length 695;
Pred. No. 1.4e+02;
1; Mismatches 1; Indels
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Search completed: October 29, 2002, 14:07:51 Job time : 40 secs

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Result
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Perfect score:
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Maximum Match 100%
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        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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DB
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1: /cgn2_6/ptodata/1,
2: /ggn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
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length: 2000000000
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140
1 RLEAKHRENVPGHEI
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Match
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Gapop 10.0 , Gapext 0.
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      Listing first 45 summaries
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Copyright (c) 1993 - 2002 Compugen Ltd
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/BCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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      DВ
  US-08-726-306A-61
US-08-726-306A-87
US-07-942-245-312
US-08-726-306A-1
US-07-942-245-312
US-07-942-245-313
US-07-942-245-314
US-07-942-245-315
US-07-942-245-315
US-07-942-245-315
US-07-942-245-311
US-07-942-245-311
US-07-942-245-311
US-09-134-001C-4012
US-09-134-001C-4012
US-09-134-001C-4012
US-09-134-001C-4012
US-09-134-001C-4012
US-09-134-001C-4012
US-09-134-001C-4012
US-09-134-001C-4012
US-08-816-528A-6
PCT-US94-07799-7
US-08-816-693A-2
US-08-885-291-2
US-08-885-291-2
US-08-942-245-302
US-08-253-155A-45
PCT-US92-09070-5
US-08-253-155A-45
PCT-US92-09070-5
US-08-253-155A-45
US-07-746-250-15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27
Sequence 61, Appl Sequence 321, Appl Sequence 312, Appl Sequence 312, Appl Sequence 314, App Sequence 315, App Sequence 315, App Sequence 349, Appl Sequence 311, App Sequence 311, App Sequence 7, Appl Sequence 7, Appl Sequence 6, Appl Sequence 6, Appl Sequence 2, Appl Sequence 2, Appl Sequence 2, Appl Sequence 30, Appl Sequence 59, Appl Sequence 159, Appl Sequence 159, Appl Sequence 159, Appl Sequence 159, Appl Sequence 15, Appl Sequence 15, Appl Sequence 16, Appl Sequence 17, Appl Sequence 18, Appl Sequence 18, Appl Sequence 19, Appl Sequence 19
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8-741-589A-13 Sequence 8-39-152A-23 Sequence 8-39-276A-10 Sequence 8-68-329-2 Sequence 8-68-329-2 Sequence 8-362-670B-2 Sequence 8-362-670B-34 Sequence 8-362-670B-34 Sequence 8-362-670B-34 Sequence 8-362-670B-34 Sequence 8-68-324-2 Sequence 8-68-324-34 Sequence 8-68-324-34 Sequence 8-69-28 Sequence 8-69-28 Sequence Sequence 8-608-324-28 Sequence 8-608-324-28 Sequence 8-608-324-28 Sequence Sequenc	Query Match 77.9% Best Local Similarity 100.0 Matches 21; Conservative	** RESULT 1 Sequence 61, Application US/01 Patent No. 5958684 GENERAL INFORMATION: APPLICANT: Van Leeuwen, F. APPLICANT: Burbach, Johann APPLICANT: Grosveld, Frani TITLE OF INVENTION: DIAGN NUMBER OF SEQUENCES: 189 CORRESPONDENCE ADDRESS: ADDRESSEE: Banner & Wit. STREET: 1 Financial Cent CITY: Boston CITY: Boston CITY: Boston COMPUTER READABLE FORM: MEDIUM TYPE: Diskette, COMPUTER: IBM PC compat, OPERATING SYSTEM: PC-DO: SOFTWARE: Worderfect 6 CURRENT APPLICATION NUMBER: US/ FILING DATE: 02-Oct-199 PRIOR APPLICATION NUMBER: GB' FILING DATE: 02-Oct-199 PRIOR APPLICATION NUMBER: GB' PRIOR APPLICATION NUMBER: GB' FILING DATE: 01-Jan-199 PRIOR APPLICATION NUMBER: US/ TELEPHONE: (617) 345-911 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 25 amino acids TYPE: amino acid STRANDEDNESS: single TOPOLOGY: unknown MOLECULE TYPE: protein		28 42 30.0 129 1 29 42 30.0 155 1 30 42 30.0 155 2 31 42 30.0 155 2 32 42 30.0 276 1 34 42 30.0 276 1 35 42 30.0 294 3 36 42 30.0 294 4 42 30.0 294 3 37 42 30.0 294 4 42 30.0 388 1 40 42 30.0 388 1 41 42 30.0 388 3 42 30.0 388 3 41 42 30.0 388 3 42 30.0 388 3 41 42 30.0 388 3 42 30.0 388 3 41 42 30.0 388 4 42 30.0 411 1
Sequence	atch 77.9%; Score 109; cal Similarity 100.0%; Pred. No. 121; Conservative 0; Mismatche	1 17.86-306A-61 17.80-306A-61 17.NO. 5958684 18.NO.	ALIGNMENTS	8 42 30.0 129 1 9 42 30.0 155 2 10 42 30.0 155 2 11 42 30.0 160 2 12 42 30.0 276 1 42 30.0 294 4 42 30.0 294 4 42 30.0 294 4 42 30.0 294 4 42 30.0 388 1 6 42 30.0 388 3 7 42 30.0 388 3 1 42 30.0 388 3 2 42 30.0 388 5 4 30.0 411 1
aps	DB 2; Length 25; .3e-11; s 0; Indels 0; Ga	REAGENTS Mb storage		Sequence 13 Sequence 10 Sequence 10 Sequence 10 Sequence 17 Sequence 2 Sequence 2 Sequence 2 Sequence 2 Sequence 3 Sequence 3 Sequence 3 Sequence 34 Sequence 38

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RENVPGHERMGRGRTSSKELA 25 RENVPGHERMGRGRTSSKELA

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RESULT 2
US-08-726-306A-87
; Sequence 87, Application US/08726306A
; Sequence 87, Application US/08726306A
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US-07-942-245-321
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                                                                                                                             Sequence 321, Application US/07942245 Patent No. 5639641
                                                                                                                                                                                                                                                                                                            Matches
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FILLING DATE: 02-Oct.1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 95/20080.4
FILLING DATE: 02-Oct.1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/009,832
APPLICATION NUMBER: US 60/009,832
APPLICATION INFORMATION:
NAME: Williams, Ph.D., Kathleen M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: van Leeuwen, Frederik Willem
APPLICANT: Burbach, Johannes Peter Henri
APPLICANT: Grosveld, Franklin G.
TITLE OF INVENTION: DIAGNOSIS METHOD AND REAGENTS
NUMBER OF SEQUENCES: 189
                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (617) 345-9111 INFORMATION FOR SEQ ID NO:
                  APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 25 amino acids
TYPE: amino acid
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 345-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: WordPerfect 6.1 CURRENT APPLICATION DATA:
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                                                    APPLICANT: PEDERSEN,
APPLICANT: SEARLE,
APPLICANT: REES,
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   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: sing TOPOLOGY: unknown
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                                                                                                                                                                                                                                                                                                         Match 77.9%;
Local Similarity 100.0%;
les 21; Conservative
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STREET: 1 Financial Center
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Williams, Ph.D., Kacı...
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                  REES,
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GUILD,
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Michael A.
Braydon C.
SURFACE RESIDUE VENEERING OF RODENT
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                                                                                         Jan T.
                                                      Stephen M.J.
Anthony R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/726,306A
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                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                           Score 109; [
; Pred. No. 1.
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                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                          .3e-11;
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                                                                                                                                                                                                                                                                                                           0,
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RESULT 4
US-08-726-306A-1
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APPLICATION NUMBER: US/07/942
FILING DATE: 09-SEP-1992
CLASSIFICATION: 530
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 293-7060
TELEFAX: (202) 293-7860
TELEFAX: 6491103
INFORMATION FOR SEQ ID NO: 321:
SEQUENCE CHARACTERISTICS:
LENGTH: 26 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application Patent No. 5958684 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 9
                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WordPerfect 6.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/726,306A
APPILICAL
FILING DATE: 01-Jan. -
FILING DATE: 01-Jan. -
FILING TOTAL PROPERTY (ACENT INFORMATION:
ATTORNEY/ACENT INFORMATION:
WILLIAMS, Ph.D., Kathl
                                                       APPLICATION NUMBER: GB 95/20080.4 FILING DATE: 02-OCT-1995 PRIOR APPLICATION UNMBER: US 60/009,832 FILING DATE: 01-Jan-1996
                                                                                                                                           FILING DATE: 02-Oct-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: van Leeuwen, Frederik Willem APPLICANT: Burbach, Johannes Peter Henri APPLICANT: Grosveld, Franklin G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                STATE: MA COUNTRY: US ZIP: 02111
                                                                                                                                                                                                                                                                                                                                                STREET: 1 F1:
CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: HP 9000
OPERATING SYSTEM:
SOFTWARE: In hour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 2100 Pen:
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
wes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 EAKHRENVPGHERMGRGRTS 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EVRPGKGTPGHEKKGRSSTS 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RY: United States 20037-3202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08726306P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.C.
                                                                                                                                                                                                                                                                                                                                                                 E: Banner & Witcoff, Ltd
1 Financial Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3: Sughrue, Mion, Zinn, Macpeak & Seas 2100 Pensylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HP 9000/700 Workstation
                                                                                                                                                            02-Oct-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35.7%; Score 50;
45.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTIBODIES: 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/07/942,245
                                                                                                                                                                           US/08/726,306A
                       Kathleen M
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                                                                                                                                                                                                                                                                  1.44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
0.087;
                                                                                                                                                                                                                                                                  Mb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
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SEQUENCE CHARACTERISTICS:
LENGTH: 26 amino action:

TYPE: amino INFORMATION FOR SEQ ID NO: 312:

SEQUENCE CHARACTERISTICS:
LENGTH: 26 amino actions amino ac
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 312, Application US/07942245 Patent No. 5639641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 33.6%;
Best Local Similarity 100.0%;
Matches 10; Conservative
                                                                                                                                                                                   Query Match
                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: HP 9000/700 Workstation

OPERATING SYSTEM: UNIX

SOFTWARE: IN house

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/942,245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acids
STRANDEDNESS: Sing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 10 amino acids
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TELEPHONE: (617) 345-9100
TELEFAX: (617) 345-9111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: unknown MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 09-SEP-1992
CLASSIFICATION: 530
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: PEDERSEN, APPLICANT: SEARLE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 2100 Pens
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18 RGRTSSKELA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                        Local Similarity les 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RGRTSSKELA 10
   σ
                                                          3 EAKHRENVPGHERMGRGRTS 22
ELKPGKGTPGHEKKGTSSTS 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20037-3202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Sughrue, Mion, Zinn, Macpeak & Seas 2100 Pensylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROGUSKA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REES,
                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Anthony R.
Michael A.
Braydon C.
SURFACE RESIDUE VENEERING OF RODENT
                                                                                                                                                     32.9%;
45.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jan T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stephen M.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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Pred. No.
                                                                                                                        2;
                                                                                                                                                         Score 46; DB Pred. No. 0.4;
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                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 10;
0.084;
hes 0; Indels
                                                                                                                                                                                   DB 1; Length 26;
                                                                                                                        9;
                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                        Gaps
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RESULT 6

Query Match Best Local Similarity

31.4%;

Score 44; Pred. No.

DB 1; 0.86;

Length 26;

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; TOPOLOGY: 1; MOLECULE TYPE: US-07-942-245-314
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LENGTH: 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Lynn Doucette-Stamm et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCC
TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC-007
CURRENT APPLICATION NUMBER: US/09/134,001C
CURRENT FILING DATE: 1998-08-13
PRIOR APPLICATION NUMBER: US 60/064,964
PRIOR FILING DATE: 1997-11-08
PRIOR PILING DATE: 1997-08-14
NUMBER: OF SEQ ID NOS: 5674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
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                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Staphylococcus epidermidis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                               APPLICATION NUMBER: US/07/9
FILING DATE: 09-SEP-1992
CLASSIFICATION: 530
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 293-7060
                                                                                                                                                                                                                                 COMPUTER: HP 9000/700 V
OPERATING SYSTEM: UNIX
SOFTWARE: In house
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 26 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               186 NLPGHVEAMGVSQTSTLTLA 205
                                                                                                            TELEPHONE: (202) 293-7860
TELEFAX: (202) 293-7860
TELEX: 6491103
                                                                                                                                                                                                                                                                                                                                                                        STREET: 2100 Pen:
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                       COUNTRY: United States
                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
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                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                     D.C.
                                                                    26 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GUILD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEARLE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROGUSKA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REES,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEDERSEN, Jan T
                                                                                                                                                                                                                                                                    E: Floppy disk
HP 9000/700 Workstation
SYSTEM: UNIX
                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                         Sughrue, Mion, Zinn, Macpeak & Seas
                 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Michael A.
Braydon C.
SURFACE RESIDUE VENEERING OF RODENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTIBODIES
522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephen M.J.
Anthony R.
                                                                                                                                                                                                                       US/07/942,245
                                                                                                       314:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 45.5;
Pred. No. 21;
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Matches

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RESULT 9
US-07-942-245-349
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TELEPHONE: (202) 293-7060
TELEFAX: (202) 293-7860
TELEX: 6491103
INFORMATION FOR SEQ ID NO: 315:
SEQUENCE CHARACTERISTICS:
LENGTH: 26 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-07-942-245-315
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Patent No. 5639641
                                                                                                                                                                                                                                                                                                                                                                                                                                  Duery Match
Best Local 9
                                              GENERAL INFORMATION:

APPLICANT: SEARLE, Stephen M.J.

APPLICANT: REES, Anthony R.

APPLICANT: ROGUSKA, Michael A.

APPLICANT: ROGUSKA, Michael A.

APPLICANT: ROGUSKA, MICHAEL A.

APPLICANT: ROGUSKA, MICHAEL A.

APPLICANT: BIATVON C.

TITLE OF INVENTION: SURFACE RESIDUE VENEERING OF RODENT NUMBER OF SEQUENCES: 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTY:
COUNTY:
ZIP: 20037-3202
ZIP: 20037-3202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: HP 9000/700 Workstation
OPERATING SYSTEM: UNIX
SOFTWARE: In house
SOFTWARE: TO NATA:
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APPLICANT: ROGUSKA,
APPLICANT: GUILD,
TITLE OF INVENTION: S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/942,245
FILING DATE: 09-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: pept
                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: PEDERSEN, APPLICANT: SEARLE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 45.0%; hes 9; Conservation
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                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 530
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                                                                                                                                                                                                                                                                                                                                                                          3 EAKHRENVPGHERMGRGRTS 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                     ELKPGKGTPGHENKGTSSTS 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EAKHRENVPGHERMGRGRTS 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EVRPGKGTPGHEKKGTSSTS 24
                                                                                                                                                                                                                           349, Application US/07942245
o. 5639641
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    Sughrue, Mion, Zinn, Macpeak & Seas
2100 Pensylvania Avenue, N.W.

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Anthony R.
Anthony R.
Michael A.
Braydon C.
SURFACE RESIDUE VENEERING OF RODENT
ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                           Score 44; DB 1
Pred. No. 0.86;
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                              10; Indels
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US-09-026-482B-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 31.4%;
Best Local Similarity 45.0%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: REISER, STEVEN E.
APPLICANT: SOMMERVILLE, CHRIS
TITLE OF INVENTION: ACYL-COA REDUCTASE
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                              APPLICATION NUMBER: US/09/026
ETILING DATE: 02/19/98
ATTORNEY/AGENT INFORMATION:
NAME: ALWAN, JOY
REGISTRATION NUMBER: 40486
REFERENCE/DOCKET NUMBER: S-87
TELECOMMUNICATION INFORMATION:
TELEPHONE: 530-252-2179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 6491103
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 26 amino acids
                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 2003/-3200
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: HP 9000/700 Workstation
                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORDPERFECT 6.22
CURRENT APPLICATION DATA:
               TOPOLOGY: 1
MOLECULE TYPE:
                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 295 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
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TELEPHONE: (202) 293-7060
TELEEAX: (202) 293-7860
TELEEX: 6491103
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: DEPARTMENT OF ENERGY ADDRESSEE: GC-62 (FORSTL) MS-6F-06; STREET: 1000 INDEPENDENCE AVE. S.W.
                                                    STRANDEDNESS:
                                                                                                                                              TELEFAX: 630-252-2779
                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: WASHINGTON, D.C. ZIP: 20585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/0:
FILING DATE: 09-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Washington STATE: D.C.
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                                                    single
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Pred. No. 0.86;
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Matches

Sequence

Patent No.

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RESULT 12
US-07-942-245-311
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; LENGTH: 617
; TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/055,779 PRIOR FILING DATE: 1997-08-14 NUMBER OF SEQ ID NOS: 5674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/134,001C CURRENT FILING DATE: 1998-08-13 PRIOR APPLICATION NUMBER: US 60/064,964 PRIOR FILING DATE: 1997-11-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Lynn Doucette-Stamm et al TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS FILE REFERENCE: GTC-007
                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: HP 9000/700 Workstation
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
     CLASSIFICATION: 530
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 293-7060
TELEPAX: (202) 293-7860
                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/942,245
FILING DATE: 09-SEP-1992
                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 522
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sughrue, Mion, Zinn, Macpeak & Seas
STREET: 2100 Pensylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: PEDERSEN, Jan T.
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                               COMPUTER: HP YOUV, OPERATING SYSTEM: UNIX
OPERATING IN house
TO DATA:
                                                                                                                                                                                                                                          COUNTRY:
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Local Similarity 50.0%;
nes 7; Conservative
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                                                                                                                                                                                                                                                         D.C.
                                                                                                                                                                                                                                          United States
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REES,
                                                                                                                                                                                                                                                                                                                                                                                                                   ROGUSKA,
                                                                                                                                                                                                                                                                                                                                                               Michael A.

Braydon C.

SURFACE RESIDUE VENEERING OF RODENT
ANTIBODIES
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephen M.J.
Anthony R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 44; DB 4; Length 617; Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 44; DB 4; Length 295; Pred. No. 18;
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US-08-581-528A-7
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Best Local Similarity
"~+~hes 8; Conserve
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                 Query Match
Best Local :
   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Lee, Se-Jin
APPLICANT: Huynh, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson, P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: 6491103
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                TELEFAX: 619/678-5099
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 619/678-5070 TELEFAX: 619/678-5099
                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 03-Sept-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/089,670
FILING DATE: 09-JUL-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/581,528A
FILING DATE: 03-Sept-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                            FEATURE:
                                                                                                                                                       TOPOLOGY: 1
MOLECULE TYPE:
                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Lisa A. Haile, Ph.I
                                                                                                                                          IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
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                                                                                                                         CLONE:
 Local Similarity es 9; Conserv
                                                                                                                                                                                                                                                                                                            NAME: Lisa A. Haile, Ph.D. REGISTRATION NUMBER: 38,347 REFERENCE/DOCKET NUMBER: 07
                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Fish & KLCHALUSON, ... 1400 STREET: 4225 Executive Square, Suite 1400 CITY: La Jolla
                                                                                                                                                                                    STRANDEDNESS:
                                                                             LOCATION:
                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
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   Conservative
                                                                                                                                                                      linear
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                Score 43; DB 2;
Pred. No. 8.3;
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Pred. No.
Mismatches
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                             Length 119;
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Indels
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Gaps
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0;
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12 GHERMGRGRTSSKEL 26

В

9 GHGRRGRSRCSRKSL 23

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                                                                                                                                                                                                                                         RESULT 15
US-08-581-528A-6
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GENERAL INFORMATION:
GENERAL THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7
NUMBER OF SEQUENCES: 21
                                                                                                                                                                                     Sequence 6, Application US/08581528A Patent No. 5986058 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                      30.7%;
Best Local Similarity 60.0%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (619) 455-5110 INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: TUMARKIN, LISA A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: p
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                    APPLICANT: Lee, Se-Jin APPLICANT: Huynh, Thanh
                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7 NUMBER OF SEQUENCES: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                               12 GHERMGRGRTSSKEL 26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: P-38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 08-JUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: UZIP: 90067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                STREET: 4225 E3
CITY: La Jolla
STATE: CA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE:
COUNTRY: UZIP: 92037
                                                                ADDRESSEE: Fish & Richardson, P.C. STREET: 4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                               9 GHGRRGRSRCSRKSL 23
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1880 Century Park East, Suite 500
                USA
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38,347
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                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version #1.25
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Search completed: October 29, 2002, 14:06:26 Job time : 27 secs
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                                                                                                                   Query Match
Best Local Similarity
' has 9; Conserv
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                                                                                                                                                                                                                                                                           TELEFAX: 619/678-5099
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/581,528A FILING DATE: 03-Sept-1993 CLASSIFICATION: 435 PRIOR APPLICATION NOATA: APPLICATION NUMBER: US 08/089,670 FILING DATE: 09-JUL-1993
                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 07:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/678-5070
                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Lisa A. Haile, Ph.D.
REGISTRATION NUMBER: 38,347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                    51 GHGRRGRSRCSRKSL 65
                                                                                                    12 GHERMGRGRTSSKEL 26
                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                161 amino acids
                                                                                                                                    Conservative
                                                                                                                                                30.7%;
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Title:
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Sequence:
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1: /SIDS2/gcgdata/gc
2: /SIDS2/gcgdata/gc
3: /SIDS2/gcgdata/gc
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(without alignments)
116.057 Million cell updates/sec
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           110:
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/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908470
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES	
IES	

Result	Score	Query Match Length DB	ength		ID	Description
1	140	100.0	27	21	AAY56392	Mutant beta-APP pr
2	140	100.0	28	19	AAY21521	Human beta-APP exo
ω	140	100.0	48	22	AAB99217	Beta-amyloid precu
4	109	77.9	25	19	AAY20219	Human beta-amyloid
თ	109	77.9	300	18	AAW18643	Fragmented human a
თ	99	70.7	19	21	AAY56391	Mutant beta-APP pr
7	97	69.3	28	19	AAY21522	Human beta-APP exo
8	93	66.4	17	21	AAY56393	Mutant beta-APP pr
9	82.5	58.9	19	22	AAB99216	AMY6 peptide. Uni
10	63	45.0	14	22	AAB99215	AMY5 peptide. Uni

Frameshift mutant beta-amyloid precursor and ubiquitin-B peptides, useful for treating Alzheimer's disease and Down syndrome

45	44	43	42	41	40	39	38	37	36	3 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
46	46	46	46	46.5	46.5	46.5	46.5	•	47	47	47	47	47	47.5	47.5	47.5	48	48	48	48	48	48	48	48	48	49	49	50	50	50	50.5	51	51	58
32.9				Ψ	ω	Ψ	Ψ	ω	ω	'n	'n	ω	ω	Ψ	Ψ	Ψ	4.	4.	4.	4.	4.	4.	34.3	34.3	٠.		5	5		5		٠	36.4	41.4
349	329	138	26	296	296	288	281	56	117	46	10	10	10	332	332	226	1006	912	31	31	31	31	31	31	31	193	140	180	72	26	491	57	57	12
22	21	22	15	22	22	22	21	22	21	21	22	19	18	22	9	22	23	23	23	22	22	22	22	22	22	22	20	22	23	15	22	22	22	21
AAB65694	7	AAU42121	AAR52341	AAB79319	AAG89927	AAB79320	AAG29741	AAU56187	AAG12574	AAG57802	AAB99214	AAY20152	AAW18633	AAB69572	AAP80534	ABG08110	ABP61502	ABP61501	ABG42006	AAM32452	AAM19485	AAM72192	AAM59619	ABB23939	ABB38968	ABB68806	AAY59810	AAU45481	ABB53619	AAR52350	ABB59130	AAU66292	67	AAY56394
Novel protein kina	Gene 21 human secr	Propionibacterium	Mouse heavy chain	Corynebacterium gl	C glutamicum prote	Corynebacterium gl	Arabidopsis thalia	Propionibacterium	Zea mays protein f	Arabidopsis thalia	AMY1 peptide. Uni	Human beta-APP imm	Peptide resulting	Cephalosporium acr	Deacetoxycephalosp	Novel human diagno	Human NF-kB activa	Human NF-kB activa		Peptide #6489 enco	Peptide #5919 enco	Human bone marrow	Human brain expres	Protein #5938 enco	Peptide #6474 enco	Drosophila melanog	Human normal ovari	Propionibacterium	Lactococcus lactis	Mouse heavy chain	Drosophila melanog	Propionibacterium	nibacteriu	Mutant beta-APP pr

ALIGNMENTS

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RESULT 1
AAY56392
ID AAY5
XX AAY5
AC AAY5
XX Muta
XX Muta
XX Muta
XX Muta
XX Muta
XX Muta
XX Synt
OS Homc
XX Wo99
XX W099
XX W
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mutant beta-APP protein peptide sequence SEQ ID NO:2.
                                                                                                                                  WPI; 2000-039070/03
                                                                                                                                                                                                                          Gaudernack G,
                                                                                                                                                                                                                                                                                                                   (NHYD ) NORSK HYDRO AS.
                                                                                                                                                                                                                                                                                                                                                                                                            08-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY56392 standard; peptide; 27 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                          Eriksen
                                                                                                                                                                                                                                                                                                                                                                                                            98NO-0002098.
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                                                                                                                                                                                                                          JA,
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RESULT 2
AAY21521
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             frameshift mutation; age-related disease; neurodegenerative disorder; Alzheimer's disease; Down's syndrome; myotonic dystrophy; neuronal; Huntington's disease; bown's syndrome; myotonic dystrophy; neuronal; diabetes mellitus type II; microtubule associated protein; Tau; Big Tau; ubiquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M; neurofilament-F; presenilin I; presenilin II; cellular tumour antigen; glial fibrillary acidic protein; GPAP; p53; semaphorin III; HUPF-1; bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HMGP-C; NSP-A; high mobility group protein-C; neuroendocrine specific protein A.
   Disclosure;
                                                                                                               Diagnosing disease by detecting frameshift mutations in RNA or corresponding protein mutations - used to diagnose cancer and neurological diseases, particularly Alzheimer's disease, and also
                                                                                                                                                                                                                                    WPI; 1998-609901/51.
N-PSDB; AAX75771.
                                                                                                                                                                                                                                                                                                                                                                            (UYUT-)
(ROYA-)
(UYRO-)
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                                                                                                                                                                                                                                                                                                                         Burbach JPH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY21521 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                    treatment
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      beta-amyloid precursor protein; beta-APP; diagnosis; cancer;
                                                                                                                                                                                                                                                                                                                                                                            ROYAL NETHERLANDS ACAD ARTS & UNIV ROTTERDAM ERASMUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                        RIJKSUNIV UTRECHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27
   Figure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                    and
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                                                                                                                                                                                                                                                                                                                         Grosveld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-0043163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-IB00705
                                                                                    prevention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33pp; English.
   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
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258pp; English
                                                                                                                                                                                                                                                                                                                         FG,
                                                                                                                                                                                                                                                                                                                         Van Leeuwen
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                                                                                       with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 140; DB 21;
Pred. No. 6.6e-16;
Mismatches 0;
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                                                                                    specific
                                                                                    ribozymes
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                                                                                    or wild-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27;
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RESULT 3
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ID AAB9
CCCXCXCXTTTTTX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This invention describes a novel method for the diagnosis of a disease caused by, or associated with, an RNA molecule that has a frameshift cumutation. The method is used to diagnose age-related diseases, especially cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer's disease, Down's syndrome, myotonic dystrophy, Huntington's disease, C multiple sclerosis, alcoholic liver disease, diabetes mellitus type II and many others listed) or susceptibility to these disorders. The method allows a definitive diagnosis of Alzheimer's disease in living patients, at an early stage. It is based on the observation that disease may be caused by mutations in RNA rather than DNA. The invention describes the used of neuronal system RNA molecules, specifically proteins including beta-amyloid precursor protein (beta-Arp), the microtubule associated proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule cassociated protein 2 (MAP2), neurofilament-L, neurofilament-M, neurofilament-M, resenilin II, glial fibrillary acidic protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma C (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group protein-C (HMGP-C) and neuroendocrine specific protein A.
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Best Local S
Matches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                       Down's syndrome; cancer; neurodegenerative disease; rarkinson sampotrophic lateral sclerosis; Huntington's disease; spinocerebellar ataxia-3; multiple sclerosis; diabetes mellitus degenerative disease; cardiovascular disease; rheumatoid arthrit
                                                                                          Detecting a disease or pathological condition, associated with secretion of aberrant protein e.g. age-related diseases, by determining secretion aberrant protein and/or its detectable part in body fluid
                                                                                                                                                                                               HOL EM,
                                                                                                                                                                                                                                                                                               04-DEC-2000; 2000WO-NL00887
                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                              Examples;
                                                                                                                                                                                                                              (NEVW-)
                                                                                                                                                                                                                                                              03-DEC-1999;
                                                                                                                                                                                                                                                                                                                               07-JUN-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                             beta-amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disease
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                                                                                                                                                                2001-397965/42
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                                                                                tissue
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27; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          detection; age-related disease; Alzheimer's
                                                                                                                                                                                                                               KONINK NEDERLANDSE AKAD VAN WETENSCHAPPE
                                                                                                                                                                                               Van
                                              Fig 2;
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                                                                                                                                                                                                 Leeuwen
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                                                                                                                                                                                                                                                                                                                                                                                                                             precursor
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                                                                                                                                                                                                                                                              99EP-0204140
                                            36pp;
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                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
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Pred. No. 6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein fragment
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5.9e-16;
s 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               disease;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disease;
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The present invention relates to a method for detecting a dipathological condition associated with molecular misreading

a disease

coding

sequences in

the

genome and/or associated with the clearance of aberrant hod comprises providing a sample of a body fluid and/or

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ARESULT 4
AAX20219
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AAX2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer; frameshift mutation; age-related disease; neurodegenerative disorder; Alzheimer's disease; Down's syndrome; myotonic dystrophy; neuronal; Huntington's disease; multiple sclerosis; alcoholic liver disease; diabetes mellitus type II; microtubule associated protein; Tau; Big Tau; biquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M; neurofilament-F; presentlin I; presentlin II; cellular tumour antigen; glial fibrillary acidic protein; GFAP; p53; semaphorin III; HUPF-1; bcl-2; B-cell leukemia/Jymphoma 2 proto-oncogene; HMCP-C; NSP-A; high modified.
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Diagnosing disease by corresponding protein
                                                                                                                 WPI; 1998-609901/51.
N-PSDB; AAX75753.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                high mobility group protein-C; neuroendocrine specific protein A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human beta-amyloid precursor protein mutant fragment 44.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-OCT-1998
                                                                                                                                                                                                                                                                                                     (UYUT-) RIJKSUNIV UTRECHT.
(ROYA-) ROYAL NETHERLANDS ACAD ARTS &
(UYRO-) UNIV ROTTERDAM ERASMUS.
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       detecting
mutations
                                                                                                                                                                                                                              FG,
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Pred. No. 1.3e-15;
Mismatches 0;
   frameshift mutations in RNA - used to diagnose cancer an
                                                                                                                                                                                                                                  Leeuwen FW
                                                                                                                                                                                                                                                                                                                                                SCI.
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G

25 27 0;

Q

RENVPGHERMGRGRTSSKELA RENVPGHERMGRGRTSSKELA

Query Match Best Local Matches

Similarity

77.9%;

Score 109; DB 19; Pred. No. 7.8e-11;

Length Indels

Mismatches

0;

0

Gaps

0

Conservative

Sequence

25

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disease, Down's syndrome, myotonic dystrophy, Huntington's disease, multiple sclerosis, alcoholic liver disease, diabetes mellitus type II and many others listed) or susceptibility to these disorders. The method allows a definitive diagnosis of Alzheimer's disease in living patients, at an early stage. It is based on the observation that disease may be caused by mutations in RNA rather than DNA. The invention describes the used of neuronal system RNA molecules, specifically proteins including beta-amyloid precursor protein (beta-App), the microtubule associated proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule associated protein (GPAP), neurofilament-L, neurofilament-F, presentiin I, presentiin II, glial fibrillary acidic protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma 2 (bcl-2) proto-oncogene, semaphorin III, HUFF-1, high mobility group
                                                                                                                                                                                                                                                                                                                                                                                                                   This invention describes a novel method for the diagnosis of a disease caused by, or associated with, an RNA molecule that has a frameshift mutation. The method is used to diagnose age-related diseases, especial cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer', and a wide range of neurodegenerative disorders (e.g. Alzheimer').
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   neurological diseases, particularly Alzheimer's disease, and also for treatment and prevention with specific ribozymes or wild-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Figure
                                                 protein-C
                                                       (HMGP-C) and neuroendocrine specific protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       258pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             especially
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*RESULT 5 AAW18643 Frameshift mutation product; GAGA motif; somatic mutation; diagnosis; detection; antibody; probe; cancer; neoplasia; neurodegenerative; parkinson's; Alzheimer's disease; Pick's; Huntington's disease; Down's syndrome; frontal lobe dementia; progressive supranuclear pals; PSP; amyotrophic lateral sclerosis; multiple sclerosis; MS; cardiovascular; rheumatoid arthritis. AAW18643 standard; Fragmented 22-JUL-1997 AAW18643; Homo sapiens human amyloid A4 gene +1 frameshift mutant (first entry) Protein; 300 A progressive supranuclear palsy; product

Misc-difference

Peptide

179..188

/note=

"antigenic peptide production"

/note= "X corresponds accompanying |

s to DNA

a stop codon in file, AAT69789" used for antibody

the

Location/Qualifiers

(ROYA-) ROYAL 11-JAN-1996; 02-OCT-1995;

NETHERLANDS ACAD 96US-0009832. 95GB-0020080. 96WO-IB01106

ARTS &

SCI.

10-APR-1997.

WO9712992-A2

02-OCT-1996;

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or a sequence comprising fragments of the coding sequence of the human cc amyloid A4 gene corresponding to nucleotides (nt) 147-566 followed by nt contain GACAG motifs. Frameshift mutants of the regions of the gene corresponding to nucleotides (nt) 147-566 followed by nt contain GACAG motifs. Frameshift mutants of the regions of the gene contain GACAG motifs. Frameshift mutants of the tau, ubiquitin, neurofilament subunit L, M and H and amyloid A4 genes are claimed. All these genes share a common GAGAN motif (N= A, G, C or T), which is the cc site of common GAGAN motif (N= A, G, C or T), which is the cd sorders. Antigenic peptides used for the production of antibodies, and cc small nucleic acid sequences derived from frameshift mutants are used in the diagnosis, prevention and treatment of cancer and neurodegenerative cd seases, e.g. Parkinson's disease, Alzhaimer's disease, Down's csyndrome, frontal lobe dementia (Pick's disease, Down's company), amyotrophic lateral sclerosis, Huntington's cardiovascular disease and rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
AAY56391
ID AAY
  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
 WPI;
                          Gaudernack G,
                                                                                08-MAY-1998;
                                                                                                            30-APR-1999;
                                                                                                                                       18-NOV-1999
                                                                                                                                                                W09958564-A1
                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                     gene
                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                 Alzheimer's disease;
                                                                                                                                                                                                                                                               Mutant; beta-amyloid
                                                                                                                                                                                                                                                                                                                     15-FEB-2000
                                                                                                                                                                                                                                                                                                                                                AAY56391;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYRO-)
(UYUT-)
                                                                                                                                                                                                                                                                                     Mutant beta-APP protein peptide sequence SEQ ID NO:1.
                                                                                                                                                                                                                                                                                                                                                                       AAY56391 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 22; Fig 2; 123pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Use of mutant genes having frame:shift mutation(s) - f prods. for the diagnosis, prevention and treatment of diseases, e.g. cancer or neuro:degenerative disease
                                                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 RENVPGHERMGRGRTSSKELA 27
2000-039070/03
                                                                                                                                                                                                                                  therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                             RENVPGHERMGRGRTSSKELA 188
                                                     ) NORSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 100
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROTTERDAM ERASMUS.
STATE UTRECHT.
                                                     HYDRO AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Grosveld
                          Eriksen
                                                                                98NO-0002098
                                                                                                          99WO-NO00141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77.9%; ~~
100.0%; Pr
0;
                                                                                                                                                                                                                                           precursor protein; beta-APP; ubiquitin-B; vaccine;
Down syndrome; T cellular immunity; neuroprotective;
                          JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FG,
                           Moller
                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 109;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Van Leeuwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                           X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.4e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for developing associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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RESULT 7
AAY21522
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Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                 Alzheimer's disease; Down's syndrome; myotonic dyštrophy; neuronal; Huntington's disease; multiple sclerosis; alcoholic liver disease; disease; multiple sclerosis; alcoholic liver disease; disease; multiple sclerosis; alcoholic liver disease; multiple sclerosis; alcoholic liver disease; multiple sclerosis; alcoholic liver disease; Tau; big Tau; ubiquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M; neurofilament-F; presenilin I; presenilin II; cellular tumour antigen; glial fibrillary acidic protein; GPAP; p53; semaphorin III; HUPF-1; bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HMGP-C; NSP-A; high mobility group protein-C; neuroendocrine specific protein A.
   Diagnosing disease by corresponding protein neurological diseases,
                                                                                                                                                                         (UYUT-)
(ROYA-)
                                                                                                                                                                                                                        10-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes frameshift mutant beta-amyloid precursor peptides (beta-APP) (AAY56391 to AAY56394) and mutant ubiquitin B (Ubi-B) (AAY56395 to AAY56400) associated with Alzheimer's disease and Down syndrome eliciting T cellular immunity. The peptides may be used as a vaccine for Alzheimer's disease and Down syndrome. The vaccination is sufficient to induce specific T-cell immunity to mutant beta-APP and/or Ubi-B peptides that are associated with Alzheimer's disease or Down syndrome. The patient may be stimulated in vivo or ex vivo with the peptides. The peptides and DNA encoding the peptides can also be used for the treatment or prophylaxis of Alzheimer's disease or the treatment of
                                                                                                                                                                                                                                                        02-APR-1998;
                                                                                                                                                                                                                                                                                                                           W09845322-A2
                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY21522 standard; Protein;
                                                                                                                                                                                                                                                                                           15-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human beta-APP exon 10 protein fragment.
                                                                                                                                                         (UYRO-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Frameshift mutant beta-amyloid precursor and ubiquitin-B peptides, useful for treating Alzheimer's disease and Down syndrome \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rameshift mutation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NVPGHERMGRGRTSSKELA 19
                                                                    1998-609901/51.
DB; AAX75772.
                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NVPGHERMGRGRTSSKELA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
                                                                                                                       JPH,
                                                                                                                                                   RIJKSUNIV UTRECHT.
ROYAL NETHERLANDS ACAD
UNIV ROTTERDAM ERASMUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                       Grosveld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                          97US-0043163
                                                                                                                                                                                                                                                          98WO-IB00705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            age related disease; neurodegenerative disorder;
detecting frameshift mutations in RNA or mutations - used to diagnose cancer and , particularly Alzheimer's disease, and a
                                                                                                                     FG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 b; Score 99; DB
b; Pred. No. 2.5
0; Mismatches
                                                                                                                    Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28
                                                                                                                                                                       ARTS &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 21; I
2.5e-09;
hes 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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0

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RESULT 8
AAY56393
ID AAY5
XX AAY5
XX AAY5
XX Muta
XX Muta
XX Muta
XX Muta
XX Syni
OS Home
PN WO9
YX Syni
OS Home
XX Syni
OS Home
XX Syni
OS Home
YX Syni
OS Ho
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     caused by mutations in RNA rather than DNA. The invention describes the used of neuronal system RNA molecules, specifically proteins including beta-amyloid precursor protein (beta-APP), the microtubule associated proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule associated protein 2 (MAP2), neurofilament-L, neurofilament-M, neurofilament-F, presenilin I, presenilin II, glial fibrillary acidic protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma 2 (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group protein-C (HMGP-C) and neuroendocrine specific protein A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease, Down's syndrome, myotonic dystrophy, Huntington's disease, multiple sclerosis, alcoholic liver disease, diabetes mellitus type II and many others listed) or susceptibility to these disorders. The method allows a definitive diagnosis of Alzheimer's disease in living patients, at an early stage. It is based on the observation that disease may be at an early stage. It is based on the observation that disease may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mutation. The method is used to diagnose age-related diseases, especiall cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer's
                                                                                                                                                                                                             WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mutant beta-APP protein peptide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  caused
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mutant; beta-amyloid Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY56393 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                              Claim 10;
                                                                                                                              Frameshift mutant beta-amyloid puseful for treating Alzheimer's
                                                                                                                                                                                                                                                             Gaudernack G,
                                                                                                                                                                                                                                                                                                              (NHYD)
                                                                                                                                                                                                                                                                                                                                                                    08-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                     30-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9958564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 RLEAKHRENVPGHERMGRGRTSSKELA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RLEAKHRERMSQVMRMGRGRTSSKELA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention describes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                             2000-039070/03
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                                                                                                                                                                                                                                                                                                              NORSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                           Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n describes a novel method associated with, an RNA mo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ā
                                                                                                                                                                                                                                                                                                                 HYDRO
                                                                           27; 33pp; English
                                                                                                                                                                                                                                                             Eriksen
                                                                                                                                                                                                                                                                                                                                                                    98NO-0002098
                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-NO00141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prevention with specific ribozymes or wild-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                precursor protein;
Down syndrome; T c
                                                                                                                                                                                                                                                             JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      258pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 97; DB Pred. No. 8.4e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                             Moller M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                an RNA molecule that has a frameshift
                                                                                                                              precursor
s disease a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8.4e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      beta-APP; ubiquitin-B; vaccine;
                                                                                                                              and ubiquitin-B peptides and Down syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunity; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO:3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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The present invention describes frameshift mutant beta-amyloid precursor peptides (beta-APP) (AAY56391 to AAY56394) and mutant ubiquitin-B

diseases with abundant tau-positive

filamentous

lesions,

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RESULT 9
AAB99216
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bown syndrome eliciting T cellular immunity. The peptides may be used as a vaccine for Alzheimer's disease and Down syndrome. The vaccination is sufficient to induce specific T-cell immunity to mutant beta APP and/or Ubi-B peptides that are associated with Alzheimer's disease or Down syndrome. The patient may be stimulated in vivo or ex vivo with the peptides. The paptides and DNA encoding the peptides can also be used for the treatment or prophylaxis of Alzheimer's disease or the treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMY6; disease detection; age-related disease; Alzheimer's disease; Down's syndrome; cancer; neurodegenerative disease; Parkinson's disease; amyotrophic lateral sclerosis; Huntington's disease; spinocerabellar ataxia-3; multiple sclerosis; diabetes mellitus type II; degenerative disease; cardiovascular disease; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMY 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
           patient exhibits clinical symptoms. The method is useful for diagnosing age-related diseases, preferably Alzheimer's disease, Down's syndrome or other age related diseases e.g. cancer; neurodegenerative diseases, such as frontal lobe dementia, progressive supranuclear palsy; and other
                                                                          tissue of a patient and determining a level of the aberrant protein and/or its detectable part or the ratio between the two in the body fluid and/or tissue. The method enables diagnosing the disease before the
                                                                                                                                          The present invention relates to a method for detecting a disease or pathological condition associated with molecular misreading of coding sequences in the genome and/or associated with the clearance of aberg
                                                                                                                                                                                                                                                                                                                                                                                                                       03-DEC-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB99216 standard;
                                                                                                                           protein. The method comprises providing a sample of a body fluid and/or
                                                                                                                                                                                                          Disclosure;
                                                                                                                                                                                                                                          and/or
                                                                                                                                                                                                                                                     level of aberrant protein
                                                                                                                                                                                                                                                                         secretion
                                                                                                                                                                                                                                                                                          Detecting
                                                                                                                                                                                                                                                                                                                                                        Hol EM,
                                                                                                                                                                                                                                                                                                                                                                                       (NEVW-) KONINK NEDERLANDSE AKAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      degenerative disease; cardiovascular disease;
beta-amyloid precursor protein; APP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Ubi-B) (AAY56395 to AAY56400) associated with Alzheimer's disease and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>سر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RLEAKHRENVPGHERMG
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17; Conserv
                                                                                                                                                                                                                                          tissue
                                                                                                                                                                                                                                                                                                                                                        Van Leeuwen
                                                                                                                                                                                                                                                        a disease or pathological condition, associated with of aberrant protein e.g. age-related diseases, by deaberrant protein and/or its detectable part in body f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17
                                                                                                                                                                                                         Page 24; 36pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-NL00887
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17
                                                                                                                                                                                                          English.
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                        VAN WETENSCHAPPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21,
3. 2.2e-08;
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                                                                                                                                             aberrant
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6,5,5,5,5,5,5,5,5,5,5,8,**x** &

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Query Match
Best Local
                                 pathological condition associated with molecular misreading of coding sequences in the genome and/or associated with the clearance of aberrant protein. The method comprises providing a sample of a body fluid and/or tissue of a patient and determining a level of the aberrant protein and/or its detectable part or the ratio between the two in the body fluid and/or itsue. The method enables diagnosing the disease before the patient exhibits clinical symptoms. The method is useful for diagnosing age-related diseases a preferably Alchemer's disease, Down's syndrome or the rate related diseases as a capacity of the second disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        degenerative diseases such as cardiovascular diseases and incommence degenerative diseases such as cardiovascular diseases and incommence arthritis. A number of other diseases which can be diagnosed are given in the specification. The present sequence is AMY 6 peptide, which was coupled to thyroglobulin by glutardialdehyde, and used to immunise rabbits for antibody production in the present invention. The AMY 6 peptide is a C-terminal fragment of the full-length beta-amyloid precursor protein (APP+1; mature APP and its signal peptide) protein.
                                                                                                                                                                                                                                                                                                                          Detecting a disease or pathological condition, associated with secretion of aberrant protein e.g. age-related diseases, by determine of aberrant protein and/or its detectable part in body fluid
                        other
                                                                                                                                                                                                                                                               Disclosure; Page
                                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-DEC-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     spinocerebellar ataxia-3; multiple scierosis; diabetes mellitus type II; degenerative disease; cardiovascular disease; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AMY5; disease detection; age-related disease; Alzheimer's disease
Down's syndrome; cancer; neurodegenerative disease; Parkinson's
amyotrophic lateral sclerosis; Huntington's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           disease, amyotrophic lateral sclerosis, Huntington's disease, spinocerebellar ataxia-3, multiple sclerosis; other inclusion body diseases associated with ubiquitin, diabetes mellitus type II and other degenerative diseases such as cardiovascular diseases and rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (NEVW-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-amyloid
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her age related frontal lobe de
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 된
                                                                                                                                                                                                                  present invention relates to a method for detecting
                                                                                                                                                                                                                                                                                                                                                                                                                      2001-397965/42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NVPGHERMGRGRTSSKELA
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                                                                                                                                                                                                                                                                                                            tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KONINK NEDERLANDSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Van
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99EP-0204140
                                                                                                                                                                                                                                                               24; 36pp; English
                  diseases e.g. cancer; neurodegenerative diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide; 14 AA.
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progressive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AKAD VAN WETENSCHAPPE.
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82.5; DB 22
No. 1.3e-06;
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peptides can also be used for disease or the treatment of

own syndrome.

Sequence

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                                                   Down syndrome eliciting T cellular immunity. The peptides may be used as a vaccine for Alzheimer's disease and Down syndrome. The vaccination is sufficient to induce specific T-cell immunity to mutant beta-APP and/or Ubi-B peptides that are associated with Alzheimer's disease or Down syndrome. The patient may be stimulated in vivo or ex vivo with the peptides. The peptides and DNA encoding the peptides can also be used for the peptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases with abundant tau-positive filamentous lesions, Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease, spinocerebellar ataxia-3, multiple sclerosis; other inclusion body diseases associated with ubiquitin, diabetes mellitus type II and other degenerative diseases such as cardiovascular diseases and rheumatoid arthritis. A number of other diseases which can be diagnosed are given the specification. The present sequence is AMY 5 peptide, which was coupled to thyroglobulin by glutardialdehyde, and used to immunise rabbits for antibody production in the present invention. The AMY 5 peptide is a C-terminal fragment of the full-length beta-amyloid precursor protein (APP+1; mature APP and its signal peptide) protein.
                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                           peptides
                                                                                                                                                                       The present invention describes frameshift mutant beta-amyloid
                                                                                                                                                                                                  Claim 10; Page 27; 33pp; English.
                                                                                                                                                                                                                                     Frameshift mutant beta-amyloid precursor and ubiquitin-B peptides
                                                                                                                                                                                                                                                                                                     Gaudernack G,
                                                                                                                                                                                                                                                                                                                                                            08-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mutant
                                                                                                                                                                                                                                 useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                           peptides (beta-APP) (AAY56391 to AAY56394) and mutant ubiquitin-B
(Ubi-B) (AAY56395 to AAY56400) associated with Alzheimer's diseas.
                                                                                                                                                                                                                                                                                                                              (NHYD ) NORSK
                                                                                                                                                                                                                                                                                                                                                                                        30-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mutant; beta-amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY56394;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           beta-APP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . Similarity
13; Conser
                                                                                                                                                                                                                              treating Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               precursor protein;
Down syndrome; T ce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45.0%;
100.0%;
                                                                                                                                                                                                                                                                                                     JA,
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Pred. No.
                                                                                                                                                                                                                               disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n; beta-APP; ubiquitin-B; vaccine;
cellular immunity; neuroprotectiv
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                                                                                                                                                                                                                              syndrome
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                                                                                                                                           disease and
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                                                                                                                                                                       precursor
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RESULT 12

ANU46738

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                                                                                  pustulosis, hypertosis and osteomyelitis), well is and endophthalmitis.

CC P. acnes is also involved in infections of bone, joints and the central CC nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the CC presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention CC and determining the amount of bound protein in the sample. The CC polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to CC downregulate expression and activity of P. acnes polypeptides and CC therefore treat P. acnes infections. The antibodies may also be used as CC diagnostic agents for determining P. acnes polypeptides may also be used as CC diagnostic agents for determining P. acnes presence, for example, by CC enzyme linked immunosorbent assay (ELISA).

CNOTE: The sequence data for this patent did not form part of the printed content with only mint of the printed of the pri
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02-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polypeptides. The proteins and their associated DNA sequences are used the treatment, prevention and diagnosis of medical conditions caused by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; SEQ ID No 7933; 1069pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-APR-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                               ftp.wipo.int/pub/published_pct_sequences
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGRGRTSSKELA 12
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; 2000US-216747P.
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Zhang
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100.08;
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Jen S, Carter D;
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RESULT 13
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Best Local
                                                                                                                                                             pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbant assaw (FLTSA)
                                                                                   enzyme linked immunosorbent assay (ELISA).

Note: The sequence data for this patent did not form specification, but was obtained in electronic format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the treatment, prevention and diagnosis of medical conditions caused P. acnes. The disorders include SAPHO syndrome (synovitis, acne,
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02-JUN-2000; 2000US-208841P.
07-JUL-2000; 2000US-216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequences AAU39105-AAU68017 represent Propionibacterium acnes polypeptides. The proteins and their associated DNA sequences
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Skeiky YAW,
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                                                                                                                                                                                                      useful in developmental biology and in elucidating cell signalling cell-cell interactions in higher ewarders from Drosophila. The invent insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins

(ABB57737-ABB72072).
                                                                                                                                                                          The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster polypeptide
                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                              New isolated nucleic acid genes from Drosophila and
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11-JUL-2000;
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           AAR52350
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                                                                                                                               Modification of a rodent antibody or fragment by resurfacing in order to produce a humanised rodent antibody can be determined by calculating homology between murine and human antibody surfaces. In order to test the resurfacing approach of the invention, three humanisation experiments were set up. (1) traditional loop grafting; (2) resurfacing approach using most similar chain; and (3) resurfacing approach using most similar surface residues. AAR52243-447 are the surface residue patterns in mouse heavy chain antibody variable regions. These "patches" were used in the third method, where rodent light and heavy chains were matched and the most similar human sequence found independently only over the surface residues indicated in AAR52030-67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antibody; humanised; murine; human; heavy chain; light; variable; framework region; complementarity determining region; reshaping; modelling; surface residue; modify.
                                                                                                                                                                                                                                                                                                                              Method of resurfacing of rodent antibodies to produce humanised antibody forms - for producing non-human antibodies with improved therapeutic efficiency by presenting human surface on V-region
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                                                                                                           Sequence
               EAKHRENVPGHERMGRGRTS 22
 EVRPGKGTPGHEKKGRSSTS 24
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ALIGNMENTS

A;Molecule type: DNA A;Residues: 1-72 <STO> A;Residues: 1-72 <STO> A;Cross-references: GB:AE005176; PID:g12723178; PIDN:AAK04411.1; GSPDB:GN00146 A;Experimental source: strain IL1403 C;Genetics: A;Gene: ydbC R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, ; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an A;Reference number: A82950; MUID:20437337; PMID:10984043
A;Accession: H82989 hypothetical protein ydbC [imported] - Lactococcus lactis subsp. lactis (strain C;Species: Lactococcus lactis subsp. lactis C;Date: 23-Mar_2001 #sequence_revision 23-Mar-2001 #text_change 03-Aug-2001 conserved hypothetical protein PA5246 [imported] - Pseudomonas aeruginosa (strain PAO C;Species: Pseudomonas aeruginosa C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000 C;Accession: H82989 C;Accession: A86664
R;Bollotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, Genome Res. 11, 731-753, 2001 RESULT A86664 밁 Q A;Status: preliminary A;Molecule type: DNA A;Residues: 1-157 <STO> Query Match
Best Local Similarity
"hehes 9; Conserv A; Reference number: A86625; A; Accession: A86664 A; Title: The complete genome sequence of the A; Reference number: A86625; MUID:21235186; P) A;Status: preliminary A;Gene: A; Experimental source: strain PAO1 A;Cross-references: GB:AE004937; GB:AE004091; NID:g9951553; PIDN:AAG08631.1; GSPDB:GN Query Match Best Local : Matches Genetics: 85 PA5246 5 KHRENVPGHERM------GRGRT 21 RHRE-LPGHERMARLSKLGTIDLRVDYLRPGRGRT 118 Similarity Conservative 38.98; 35.7%; Score 50; DB Pred. No. 2.2; 3; Mismatches Score 54.5; D Pred. No. 1.1; 2; Mismatches 2; he lactic acid PMID:11337471 DB 2.2; DB 2 2; 0; Length 72; Length 157; Indels bacterium Lactococcus lactis 19; an opportunistic P.; Hickey, A.; Larbig, Gaps 2 ٦ ; ጆ . ነ 달 pa

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probable cell-adhesion protein MFB1 - shiitake mushroom
C;Species: Lentinula edodes (shiitake mushroom)
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text
C;Accession: T18543
                                                                   RESULT 5
T18543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein SPBC1685.08 - fission yeast (Schizosaccharomyces pombe) C;Species: Schizosaccharomyces pombe C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 03-Dec-1999 C;Accession: T39524
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C; Superfamily: gu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        guanylate kinase VC2708 [imported] - Vibrio cholerae (strain N16961 serogroup
C:Species: Vibrio cholerae
C:Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 02-Feb-2001
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R;Wood, V.; Rajandream, M.A.; Barrell, B.G.; Hilbert, submitted to the EMBL Data Library, July 1998
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A;Accession: T39524
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                                                                                                                                                                                                                                                                                                                                                     A;Cross-references:
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                   15-Oct-1999 #text_change 21-Jul-2000
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H.; Dragoi, I.; Sellers,
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Nakazaki, N.; Shimpo, S.;
DNA Res. 8, 205-213, 2001
A;Title: Complete Genomic
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                                                                                                               A;Molecule type: mRNA
A;Residues: 1-244 <MAS>
A;Cross-references: DDBJ:AB074498
                                                                                                                                                                                                                               C;Accession: JC7801
R;Masuda, M.; Senju, S.; Fujii, S.; Terasaki, Y.; Takeya, M.; Hashimoto,
                                                                                                                                                                                                                                                                dendritic cell-associated nuclear protein 1, DCNP1 - human
C;Species: Homo sapiens (man)
C;Date: 03-Jun-2002 #sequence_revision 03-Jun-2002 #text_change 03-Jun-2002
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A; Residues: 1-829 < KUR>
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Nakazaki, N.; Shimpo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120 C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 30-Jun-2002
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A; Residues: 1-2140 <KON>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references:
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ce: strain FMC2
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M.; Yamada,
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A; Molecule type: DNA
A; Residues: 1 962 <TET>
A; Cross references: GB: AE
A; Experimental source: se
C; Genetics:
A; Gene: NMB1643
C; Superfamily: translatic
F; 465-574/Domain: transla
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Status: preliminary
Status: preliminary
Molecule type: DNA
A; Residues: 1-962 <PAR>
A; Cross references: GB: AL162757; GF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     translation initiation factor IF-2 NMB1643 [imported] - Neisseria meningitidis C;Species: Neisseria meningitidis C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 19-Jan-2001 C;Accession: C81060
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C;Superfamily: translation initiation factor IF-2;
F;465-574/Domain: translation elongation factor Tu
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R;Parkhill, J.; Achtman, M.; James, ; Holroyd, S.; Jagels, K.; Leather, Nature 404, 502-506, 2000
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C;Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 02-Feb-2001
C;Accession: A81817
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                                                                    EPKEKAAKPKHERNGKGKDAKK 216
                                                                                                  EAKHRENVPGHERMGRGRTSSK 24
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                                                                                                                                   Similarity
9; Conser
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9; Conserv
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                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                         GB:AE002514;
                                                                                                                                                                                                                                                           serogroup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
                                                                                                                                               34.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34.3%;
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                                                                                                                                  4.
                                                                                                                                                                                                                                                          GB:AE002098; NID:g7226886; PIDN:AAF41992.1; B, strain MC58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GB:AL157959; NID:g7380371; PIDN:CAB85118.1; PID:g73805 A, strain 22491
                                                                                                                                                 Score
Pred.
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               K.D.; Bentley,
S.; Moule, S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                  Mismatches
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                                                                                                                              9;
                                                                                                                                                                                          translation elongation homology <ETU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S.D.; Churcher, C.; Klee,
Mungall, K.; Quail, M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.
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                                                                                                                                                              Length 962;
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                                                                                                                                Indels
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                                                                                             RESULT 12
A35848
                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-382 <MUR>
A; Cross-references: EMBL: AL021411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
T35706
                                                                                                                                                           B
                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                 C; Keywords: aminotransferase
                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: Z21548
A; Accession: T35706
                                                                                                                                                                                                                                                                                                                                                A; Experimental source:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Murphy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
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A;Molecule type: DNA
A;Residues: 1-76,'L' <GUT>
A;Experimental source: strain C10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Accession: T35706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: A41864; MUID: 92234966; A; Accession: A41864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-332 <SAM>
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Rio/Technology 5, 1207-1214,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Status: not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: A29711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Reference number:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Title: Cloning and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Accession: A29711; A41864
                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                     Superfamily:
                                                                                                                                                                                                                                                                                                                                     Genetics:
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Best Local
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                                                                                                                                                       EAYHRLAYPGHEPVSALEIESLRGRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L.; Harris,
                                                                                                                                                                                                                       . Similarity 12; Conserv
Y.; Penchev, R.;
860-872, 1990
                                                                                                                                                                                                                                                                                                  aspartate transaminase
                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                  strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J.E.; Slisz, M.L.;
214, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.9%;
55.0%;
                                                                                                                                                                                                                                    33.2%;
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Pred. No. 2
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competence regulatory protein ComP - Bacillus subtilis
C;Species: Bacillus subtilis
C;Date: 23-Oct-1990 #sequence_revision 23-Oct-1990 #text_change
C;Accession: A35848; D38111
R;Weinrauch, Y.; Penchev, R.; Dubnau, E.; Smith, I.; Dubnau, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probable aspartate transaminase (EC 2.6.1.1) SC7H1.11 [similarity] - Strept C; Species: Streptcomyces coelicolor C; Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Note: sequence extracted from NCBI backbone (NCBIN:104773, NCBIP:97574); this ORF A; Note: the source is designated as Cephalosporium acremonium C; Superfamily: 1-aminocyclopropane-1-carboxylate oxidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Note: the source is designated as Cephalosporium acremonium R;Gutierrez, S.; Velasco, J.; Fernandez, F.J.; Martin, J.F. J. Bacteriol. 174, 3056-3064, 1992
M;Title: The cefG gene of Cephalosporium acremonium is linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Acremonium sp.
C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 19-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      deacetoxycephalosporin C synthetase - fungus (Acremonium N;Alternate names: expandase; hydroxylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the fungal expandase/hydroxylase gene involved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIDN:CAA16198.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J.; Barrell, B.G.;
January 1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PMID:1569032
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                                                    15-oct-1999
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R;Kunst, F:, Ogasawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Berter C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Chc A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997

A;Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler icch, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.; Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A.; Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueel Y. M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon, A; Authors: Schleich, S.; Schroeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Seroi akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama, Y.; Winters, P.; Wipat, A.; Zumstein, E.; Yoshikawa, H.; Danchin, A.

A; Reference number: A69580; MUID:98044033; PMID:9384377

A; Accession: B69604

A; Catter, C.; Allon, C.; Allon, C.; Allon, C.; Allon, C.; Catter, C.; C
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A;Accession: A35848
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-769 <WREID
A;Cross-references: GB:M22856; NID:g142697; PIDN:AAA22319.1; PID:g142700
A;Cross-references: GB:M22856; NID:g142697; PIDN:AAA22319.1; PID:g142700
A;Cross-references: GB:M22856; NID:g142697; PIDN:AAA22319.1; PID:g142700
A;Cross-references: GB:M32856; NID:g142697; PIDN:AAA22319.1; PID:g142700
A;Title: Sequence and properties of comQ, a new competence regulatory gene of Bacillus sA;Title: Sequence and properties of comQ, a new competence regulatory gene of Bacillus sA;Accession: D38111
A;Molecule type: DNA
A;Residues: 1-16 <WEZD
A;Cross-references: GB:M71283; NID:g142712; PIDN:AAA22324.1; PID:g142715
C;Genetics:
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A;Start codon: ATT
C;Keywords: autophosphorylation; phosphoprotein; transmembrane protein
C;Keywords: autophosphorylation; phosphoprotein; transmembrane protein
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C;Date: 05-Dec-1997 #sequence_revision
C;Accession: B69604
                                                                    RESULT 14
AB3573
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oligopeptide transport ATP-binding C; Species: Brucella melitensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:Z99120; GB:AL009126; NID:g2635613; PIDN:CAB15157.1; PID:e1184246
A;Experimental source: strain 168
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A; Residues: 1-769 < KUN>
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Pred. No. 7
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Pred. No. 7
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                                      oppD BMEII0507 [imported] -
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2002, 14:00:27

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A; Status, From A; Shalus, From A; Shalus, From A; Molecule type: DNA A; Residues: 1-302 <KUR>
A; Residues: 1-302 <KUR>
A; Cross-references: GB: AE008918; PIDN: AAL53749.1; PID: 917984675; GSPDB: GN00191
A; Cross-imental source: strain 16M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 01-Feb-2002 #sequence_revision 01-Feb-2002 #text_change 15-Feb-2002 C;Accession: AB3573 Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanov R;DelVecchio, V.G.; Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanov ; Mazur, M.; Goltsman, E.; Selkov, E.; Elzer, P.H.; Hagius, S.; O'Callaghan, D.; Let Proc. Natl. Acad. Sci. U.S.A. 99, 443-448, 2002 A;Title: The genome seguence of the facultative intracellular pathogen Brucella melit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    homolog of cell division GTPase FtsZ, diverged [imported] - Clostridium acetobutylicu G;Species: Clostridium acetobutylicum c;Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001 C;Accession: A97325 C;Accession: A97325 C;R;Nolling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, R.; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Reference number: AD3252; PMID:11756688
A;Accession: AB3573
                                                                                                                                                                                                                                                                                                                                                   R;Nolling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R. J. Bacteriol. 183, 4823-4838, 2001
A;Title: Genome Sequence and Comparative Analysis of the A;Reference number: A96900; MUID:21359325; PMID:21359325
A;Accession: A97325
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A; Residues: 1-342 < KUR>
                                                                                                                                                                                                                                   A; Experimental source: Clostridium
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57
                                            11 PGHERMGRGRTSSKEL 26
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PGTDGSGRDRTKSKEM 72
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               GenCore version 5.1.3 (c) 1993 - 2002 Compus
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01-FEB-1995 (Rel. 3
30-MAY-2000 (Rel. 3
15-JUN-2002 (Rel. 4
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Biotechnology 5:1207-1214(1987).
-i- FUNCTION: DAOCS CATALYZES THE STEP FROM PENICILLIN N TO DEACETYLEDHALOSPORIN C, WHICH IS USED AS A SUBSTRATE TO DEACETYLEDHALOSPORIN G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-1989 (Rel. 12, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Cephalosporin biosynthesis expandase/hydroxylase [Includes: Deacetoxycephalosporin C synthetase (DAOCS) (Expandase);
Deacetoxycephalosporin C hydroxylase (EC 1.14.11.-)
(Deacetylcephalosporin C synthetase) (DACS) (Beta-lactam
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               Bacteria; Firmicutes;
                        Bacillus subtilis
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RA BOURSIS R., BOURSIST L., BERMS A., BRIGHEI S.C., BROM S.,
RA Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A.,
RA Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A.,
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RA Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A.,
RA Chim S.Y., Glaser P., M.J., Fabret C., Ferrari E., Foulger D.,
RA Fritz C., Fujita M., Fujita Y., Fuma S., Galizzi A., Galleron N.,
RA Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G.,
RA Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G.,
RA Guiseppi G., Guy B.J., Haga K., Halech J., Harwood C.R., Henaut A.,
RA Hibbert H., Holsappel S., Hosono S., Hullo M.F., Itaya M., Jones L.,
RA Kobayashi Y., Koetter P., Koningstein G., Krogh S., Kumano M.,
RA Kurita K., Lapidus A., Lardinols S., Lauber J., Lazarevic V.,
RA Kurita K., Lapidus A., Lardinols S., Lauber J., Lazarevic V.,
RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,
RA Parro V., Pohl T.M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,
RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
RA Presecan E., Pujic P., Purnelle B., Rapoport G., Rey M., Reynolds S.,
RA Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,
RA Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F.,
RA Satorian E., Scheich S., Schroeter R., Scoffone F.,
RA Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A.,
RA Tosato V., Uchiyama S., Vandenbol M., Vannier F., Vasarotti A.,
RA Yoshida K., Yoshikawa H.F., Zumstein E., Yoshikawa H., Danchin A.;
RT Tehtrilis "., Vashikawa H.F., Zumstein E., Yoshikawa H., Danchin A.;
RT The complete genome sequence of the Gram-positive bactcrium Bacillus
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Weinrauch Y., Penchev R., Dubnau E.,
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the European Bioinformatics Institute
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Bertero M.G., Bessieres P., Bolotin A., Borchert
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InterPro; IPR003594; ATPbind_ATPase.
InterPro; IPR004359; HIS_KIN_sig.
Pfam; PF02518; HATPase_C; 1.
                                        Levin D.E., Hammond C.I., Ralston R.O., Bishop J.M.; "Two yeast genes that encode unusual protein kinases."; Proc. Natl. Acad. Sci. U.S.A. 84:6035-6039(1987).
Murphy L., Shore L., Walsh S.V.;
                 STRAIN-S288c
                                                                    SEQUENCE FROM N.A. MEDLINE-87317589; PubMed=2957690;
                                                                                                        Saccharomycetales; Saccharomycetaceae;
                                                                                                               Saccharomyces cerevisiae (Baker's yeast).

Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
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                                                                                                                                                                                                                                                                                                           MW;
         D.,
                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                  PHOSPHORYLATION (AUTO-) (BY SIMILARITY).

S -> C (IN REF. 1).

D -> Y (IN REF. 1).

E -> G (IN REF. 1).

QL -> PV (IN REF. 1).
                                                                                                                                                                                                                                                                               Score 46.5;
Pred. No. 32;
                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                  CYTOPLASMIC POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
EXTRACELLULAR (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                               HISTIDINE KINASE.
                                                                                                                                                                                                                                                                                                                                                                                         EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                           EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                           E5CEACCE278DE5B4 CRC64;
        Barrell B.G.,
                                                                                                                                                             update)
                                                                                                                                                                                        1064 AA.
                                                                                                                                                     update)
                                                                                                         Saccharomyces
                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
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· · 1)
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         Rajandream M.A.,
                                                                                                                                                                                                                                                                                       Length 769;
                                                                                                                                                                                                                                                                        Indels
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APX_XENLA
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                                                                                                                                                                           Q01613;
01-JUN-1994
01-JUN-1994
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                              ACT_SITE
CONFLICT
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SGD; S0002529; KIN1.
InterPro; IPR000719; Euk_pkinase.
InterPro; IPR001772; Kinase_Cterm.
InterPro; IPR002290; Ser_thr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
Transferase; Serine/threonine-protein kinase; ATP-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M69017; AAA34722.1; -. EMBL; Z48758; CAA88675.1; -. EMBL; S42438; S42438.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1- FUNCTION: THIS PROTEIN IS PROBABLY A SERINE/THREONINE PROTEIN KINASE.
-1- SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (MAR-1995)
-:- FUNCTION: THIS PR
                                                                                                          Eukaryota; Metazoa; (
Amphibia; Batrachia;
                                                                                                                                                    APX
                                                                                                                                                              Apical protein (APX).
                                                                                                                                                                                                                                 APX_XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
NP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProDom; PD00000
SMART; SM00220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00069; pkinase; 1.
Pfam; PF02149; KA1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or send an email to license@isb-sib.ch).
              Staub O.,
                        TISSUE=Ovary;
MEDLINE=93107151; PubMed=1334959;
                                                     SEQUENCE FROM N.A.
                                                                                                                                  Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BINDING
                                                                              NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                2 LEAKHRENVPGHERMGRGRTSSKE 25
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                                                                                                                                                                                                                                                                                                     LEGKSRENAPKPNTTSQSRVSSSQ 106
                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PD000001; Euk_pkinase; sm00220; S_TKc; 1.
                                                                                                                                                                                                                                                                                                                                                                          Similarity
Verrey F., hl J.-P.;
                                                                                                        Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
3atrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                          (Rel. 29,
(Rel. 29,
(Rel. 36,
                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                           Xenopus.
                                                                                                                                                                                                                                    STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                             398
134
149
269
259
453
455
718
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976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) to the EMBL/GenBank/DDBJ databases.
PROTEIN IS PROBABLY A SERINE/THREONINE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                       32.9%;
41.7%;
              Kleyman T.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                  120070
                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROTEIN KINASE.

ATP (BY SIMILARITY).

ATP (BY SIMILARITY).

BY SIMILARITY.

BY SIMILARITY.

S -> R (IN REF. 1).

T -> H (IN REF. 1).

V -> G (IN REF. 1).

A -> R (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                  ME.
                                                                                                                                                                                                                                                                                                                                                                        Score 46;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                           γ,
                                                                                                                                                                                                                                                                                                                                                                                                                              SI -> T (IN REF. 1)
KT -> NS (IN REF. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NI -> IN (IN REF. 1).
T -> A (IN REF. 1).
                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                  E4104B84A8E45C36 CRC64;
              Benos D.J.,
                                                                                                                                                                                                                                    1420
                                                                                                                                                                                                                                                                                                                                                                          53;
                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                       Length 1064;
              Rossier B.C.,
                                                                                                                                                                                                                                                                                                                                                             Indels
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Best Local S
Matches 8
                                                                                           Congote L.F., Mazza L., Palfree R.G.E.;
"Nucleotide sequence of the central coding region of bovine
erythrotropin/insulin-like growth factor II cDNA from fetal intestine
and northern analysis of the major IGF II transcripts at the time of
hepatic erythropoiesis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Primary structure of an apical protein from Xenopus laevis that participates in amiloride-sensitive sodium channel activity.";
J. Cell Biol. 119:1497-1506(1992).
-i- FUNCTION: IS PART OF A MULTIMERIC COMPLEX WHICH IS INVOLVED 1
AMILORIDE-SENSITIVE SODIUM CHANNEL ACTIVITY.
-i- SUBCELLULAR LOCAPION: Membrane-associated.
-i- TISSUE SPECIFICITY: KIDNEY, PROXIMAL INTESTINE, OCCYTES, AND
TO A LESSER EXTENT IN THE DISTAL INTESTINE, STOMACH AND EYE.
                                                                                                                                                                       SEQUENCE OF 6-62 FROM N.A. MEDLINE=93083057; PubMed=1280544;
                                                                                                                                                                                                                                                       "The
                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-APR-1988 (Rel. 07, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
Insulin-like growth factor II precursor (IGF-II) (Erythrotropin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                            SEQUENCE OF 1-67.
MEDLINE=86085881; PubMed=3941093;
                                                                                                                                                                                                                                        growth
                                                                                                                                                                                                                                                                 Brown W.M., Dziegielewska K.M.,
                                                                                                                                                                                                                                                                                   MEDLINE=90356421;
                                                                                                                                                                                                                                                                                                  TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 6-155 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                       Nucleic Acids
                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                           Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IGF2_BOVIN
P07456;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: SOME, TO HUMAN APXL.
 "Insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                          (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 LEAKHRENVPGHERMGRGRTS 22
                                                                                                                                                                                                               n W.M., Dziegielewska K.M., Foreman R.C., Saunders N.R.; nucleotide and deduced amino acid sequences of insulin-like th factor II cDNAs from adult bovine and fetal sheep liver."; eic Acids Res. 18:4614-4614(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INMKHKQNRPNHKAYGLQRNS 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A44361;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
8; Conserv
              A., Humbel R.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sodium transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1048 1(
1420 AA;
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growth factors I and
                                                                               Physiol.
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                                                                                                                                                                                                                                                                                PubMed=2388846;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        159467
                                                                              1038:127-131(1992).
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MW; ODD8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POLY-SER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 46; DB Pred. No. 72;
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II in fetal and adult bovine
                                                                                                                                                                                                                                                                                                                                                                          Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    155 AA.
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IGF2_SHEEP
ID IGF2_SHEEP
AC P10764;
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                                                                       RESULT
                                                                                                                                                                                    8
                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                     Matches
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EMBL; X53867; CAA37861.1; -.
PIR; B25623; IGBO2.
PIR; A34645; A34645.
PIR; 800466; S00466.
PIR; S10983; S10983.
HSSP; P01344; IGF2.
                                                                                                                                                                                                                                                                                                                                                  DISULFID
DISULFID
DISULFID
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-88268820; PubMed-3390164; Francis G.L., Opton F.M., Ballard F.J., "Insulin-like growth factors 1 and 2 in and biological activities compared with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00049; Insulin; SMART; SM00078; IlGF; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=90147754; PubMed=2302223;
Li Q., Blacher R., Esch F., Congote L.F.;
"A heparin-binding erythroid cell stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   serum. Purification, primary stru
cross-reactivities.";
J. Biol. Chem. 261:569-575(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biochem. Biophys. Res. -! - FUNCTION: THE INSU!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              wovine serum has the N-terminal sequence of factor II.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          form.
                                                                                                                                            103
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                                                                                                                                                                                    7 RENVPGHERMGRGRTSSKEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THEM. BIOPHYS. RES. COMMUN. 166:557-561(1990).
FUNCTION: THE INSULIN LIKE GROUPH FACTORS POSSESS GROWTH-PROMOTING ACTIVITY. IN VITRO, THEY ARE POTENT MITOGENS FOR CULTURED CELLS.

IGF-II IS INFLUENCED BY PLACENTAL LACTOGEN AND MAY PLAY A ROLE
                                                                                                                                            RRGLPAFLRARRGRTLAKEL 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IN FETAL DEVELOPMENT.
                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family; Mitogen; Growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS00262;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR004825; Ins/IGF/relax.
                                                                                                                                                                                                                                                                                                                              155
                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               251:95-103(1988).
                                                                                                                                                                                                                                                                                                                                                       AA;
                        STANDARD;
                                                                                                                                                                                                                                                                                                                         67
28
40
61
67
155
47
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50.0%;
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Pred. No.
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                           PRT;
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                                                                                                                                                                                                                                     Mismatches
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01-JUL-1989
01-OCT-1989
01-OCT-1996
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MEDLINE-89323215; Pubm.
Hey A.W., Browne C.A.,
                                                                                                    EMBL;
                                                                                                                                                                                      modified
                                                                                                                                                                                              the European Bioinformatics Institute. The state of the s
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Ohlsen S.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-93250051; PubMed-8485157;
Demmer J., Hill D.F., Petersen G.B.;
"Characterization of two sheep insulin-like growth factor II cDNAs with different 5'-untranslated regions.";
Biochim. Biophys. Acta 1173:79-80(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-Coopworth;
MEDLINE-93250051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-90356421; PubMed-2388846; Brown W.M., Dziegielewska K.M., Foreman R.C., Saunders N.R., "The nucleotide and deduced amino acid sequences of insulin-like growth factor II cDNAs from adult bovine and fetal sheep liver.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O'Mahoney J.V., Adams T.E.;
"Nucleotide sequence of an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chor
Mammalia; Eutheria; Ceta;
Bovidae; Caprinae; Ovis,
NCBI_TaxID=9940;
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                                                                                                                                                                                                                                                                                                                                              It sheep serum.";

Chim. Blophys. Acta 997:27-35(1989).

FUNCTION: THE INSULIN-LIKE GROWTH FACTORS POSSESS GROWTH-PROMOTING ACTIVITY. IN VITRO, THEY ARE POTENT MITOGENS FOR CULTURED CELLS.

IGF-II IS INFLUENCED BY PLACENTAL LACTOGEN AND MAY PLAY A ROLE IN FETAL DEVELOPMENT.
                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  assays.";
U00666;
U00667;
U00667;
X15248;
X53554;
M89788;
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en the Swiss Institute of Bioinformatics and the En
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                                                                                                                                       equires a license agreement (See email to license@isb-sib.ch).
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e growth
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AAB60626.1;
CAA33324.1;
CAA37621.1;
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                                                                                                                                                              Ø
                                                                                                                                                                               statement is not removed
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C.A., Simpson R.J., The
lation of insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 11, Creat
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vth factor
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Cetartiodactyla; Ruminantia;
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annotation update)
II precursor (IGF-II).
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minantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ballard F.J., II: sequences
                                                                                                                                                        . Usage by and for commercial http://www.isb-sib.ch/announce/
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Matches 10
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PIR; S08567; S08567.

PIR; S10984; S10984.

PIR; S20731; S20731.

PIR; S32557; S32557.

HSSP; P01344; 1GF2.
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EMBL; X55638; CAA39163.1; -
PIR; S04858; S04858.
PIR; S08567; S
                                                                                                                                             Watanabe A., IIIyuwii, Matsunoto M., Matsuno A., Muiana M., Kishida Y., Kohara M., Matsunoto M., Takazawa M., Yamada M., Nakazaki N., Shinpo S., Sugimoto M., Takazawa M., Yamada M., Yasuda M., Tabata S.;
Yasuda M., Tabata S.;
"Complete genomic sequence of the filamentous nitrogen-fixing "Complete genomic sequence of the filamentous nitrogen-fixing "Complete genomic sequence of the filamentous nitrogen-fixing "Complete genomic sequence of the filamentous nitrogen-fixing"
                         the
                                                                                                                               cyanobacterium Anabaena sp. strain F
DNA Res. 8:205-213(2001).
-!- FUNCTION: ACTIVATION OF RUBISCO
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P58555;
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15-JUN-2002
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15-JUN-2002 (Rel. 41,
Ribulose bisphosphate
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PRINTS; PR00277; INSULINB.
SMART; SM00078; IlGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                  Watanabe A.,
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Pfam; PF00049; Insulin; 1.
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            s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EW European Bioinformatics Institute. There are no restr by non-profit institutions as long as its content ified and this statement is not removed. Usage by and
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                                                                               CARBOXYLASE/OXYGENASE; EC 4.1.1.39) INVOLVES THE AT CARBOXYLATION OF THE EPSILON-AMINO GROUP OF LYSINE CARBAMATE STRUCTURE (BY SIMILARITY).
SIMILARITY: BELONGS TO THE RUBISCO ACTIVASE FAMILY.
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Iriguchi M., Ishikawa
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 a license agreement (See http://www
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ATP-binding; Complete pro
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Eurotiales;
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MEDLINE=90287738; PubMed=2192364;
Aramayo R. Timberlake W.E.;
"Sequence and molecular structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-AUG-1990 (Rel. 15, Created)
01-FBB-1996 (Rel. 3, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Laccase precursor (EC 1.10.3.2) (Benzenediol:oxygen
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Nucleic Acids Res. 18:3415-3415(1990).

Nucleic Rolation DEGRADATION AND DETOXIFICA

PRODUCTS (PROBABLE).

-i- CATALYTIC ACTIVITY: 4 benzenediol + O(2) =
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                                                                                                         Pfam; PF00394; Cu-oxidase; PROSITE; PS00079; MULTICOPP PROSITE; PS00080; MULTICOPP
                                                                                                                                                                                                       entities requires a license agreement (S or send an email to license@isb-sib.ch).
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                                                                                   Glycoprotein;
                                                                                              Oxidoreductase; Signal;
                                                                                                                                            InterPro; IPR001117; Cu-oxidase.
InterPro; IPR002355; MultiCu_oxidse2.
                                                                                                                                                                      PIR; S10149; KSASL1.
                                                                                                                                                                                EMBL; X52552; CAA36787.1; -.
                                                                                                                                                                                                                                                                 between
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                                                                       SIGNAL
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                                                                                                                                                                                                                                                                                                                                                 H(2)0.
COFACTOR: BINDS 4 CU-IONS PER MOLECULE.
TYPE 2
                                                                                                                                                                                                                                                                                                     SIMILARITY: CONTAINS 3 PLASTOCYANIN-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                 CENTERS KNOWN AS TYPE 1 OR BLUE, TYPE 2 OR NORMAL, AND TY
3 OR COUDLED BINUCLEAR (BY SIMILARITY).
SUBCELLULAR LOCATION: Secreted (Potential).
SIMILARITY: BELONGS TO THE FAMILY OF MULTICOPPER OXIDASES
                                                                                                                                                                                                                                                                                                               SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _EMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NVPG---
                                                                                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIPGVRVPLILGIHGRKGEGKTFQCELA
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                                                                                                                                                                                                                                         non-profit
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Fungi; Ascomycota
; Trichocomaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414 AA;
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21
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79
                                                                                 Repeat.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -HERMGRGRTSSKELA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ascomycota;
                                                                                                          MULTICOPPER_OXIDASE1;
MULTICOPPER_OXIDASE2;
                                                                                                                                                                                                                                                                                                                                                                                                    ;
18:3415-3415(1990).
  20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Aspergillus nidulans).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteome
                                                                                              Copper;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a; Pezizomycotina; 
Emericella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
 PLASTOCYANIN-LIKE 1.
PLASTOCYANIN-LIKE 2.
PLASTOCYANIN-LIKE 3.
COPPER (TYPE 2) (PROB
COPPER (TYPE 3) (PROB
                                                                                                                                                                                                                  agreement (See http://www.isb-sib.ch/announce,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATP
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2; Mismatches
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                                                            POTENTIAL.
LACCASE.
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                                                                                               Metal-binding;
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                                                                                                                       FALSE_NEG
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  (PROBABLE).
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                                                                                               Lignin degradation;
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Matches 11
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16-OCT-2001
16-OCT-2001
15-JUN-2002
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                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=99296061; PubMed=10369387;
Meyers-Wallen V.N., Schlafer D., B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Canis familiaris (Dog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sex-determining region SRY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                DNA-binding; Nuclear protein; sexual differentiation.
                                                                  Pfam; PF00505; HMG_box; SMART; SM00398; HMG; 1.
                                                                                                                  EMBL; AF107021; AAD40225.1; HSSP; Q05066; 1HRY.
                                                                                                                                                                                                                                                                                                                                                                                               "Sry-negative XX sex reversal in purebred dogs mol. Reprod. Dev. 53:266-273(1999).
                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    378
                                                                                                      InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                              SWITCH IN MALE DEVELOPMENT. IT IS RESPONSIBLE FOR INITIATING M. SEX DETERMINATION. SRY HMG BOX RECOGNIZES DNA BY PARTIAL INTERCALATION IN THE MINOR GROOVE.
SUBCELLULAR LOCATION: Nuclear.
SIBILARITY: CONTAINS 1 HMG BOX.
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                                                                                                    IPR000910; HMG_12_box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 40,
(Rel. 40,
(Rel. 41,
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Last annotation
n Y protein (Test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
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COPPER
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Pred. No. 50;
                                                    Transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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purebred
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EG
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AC...) (POTENTIAL)
                                                    regulation; Activator;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         R., Keyzner
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SEQUENCE

220 AA;

25505

MW;

7AA1A474FBA4C28E

HMG BOX

DNA_BIND

Query Match

1;

Length 220;

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RESULT
DOP2_DF
ID DC
AC Q2
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RA Addams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Addams M.D., Celniker S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Haria M.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Haria M.L., Lewis M., An H.-J., Andrews-Pfannkoch C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Gherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Durbin K.J., Evangelista C.C., Ferriaz C., Ferriera S., Fleischmann W.,
RA Durbin K.J., Evangelista C.C., Ferriaz C., Ferriera S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harrey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harrey D., Heiman T.J., Wei M.-H., Ibegwam C.,
RA Harris N.L., Harrey D., Heiman T.J., Wei M.-H., Ibegwam C.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Lusko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Merkulov G., Milshina N.V., Wobarry C., Morris J., Moshrefi A.,
RA Mount S.M., Woy M., Marphy B., Murphy L., Muzny D. M., Nelson D.L.,
RA Ra Harzis O., Standers R.D.C., Scheeler F., Shen H.,
RA Ranner L., Shen H., Saunders R.D.C., Scheeler F., Shen H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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Q24563; Q24569; Q3YAJ8;
Q1-NOV-1997 (Rel. 35, Created)
Q1-NOV-1997 (Rel. 35, Last sequence up
16-OCT-2001 (Rel. 40, Last annotation
Dopamine receptor 2.
DOPR2 OR DOPR99B OR DAMB OR CG18741.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-96258265; PubMed-8663989;
Han K.-A., Millar N.S., Grotewiel M.S., Davis R.L.;
"DAMB, a novel dopamine receptor expressed specifically in Drosophila
mushroom bodies.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hall
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STRAIN=Canton-S; TISSUE=Head;
MEDLINE=96242088; PubMed=8656286;
Feng G., Hannan F., Reale V., Hon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster (Fruit fly).
Bukaryota; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Hexapoda;
Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=20196006; PubMed=10731132;
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Neurosci. 16:3925-3933(1996).
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Spier E., Spradling A.C., Stapleton M., Strong R., Sun E., Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X., Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J., Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O., Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.; "The genome sequence of Drosophila melanogaster."; Science 287:2185-2195(2000).
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LIPID
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Pfam; PF00001; 7tm_1; 1.

PRINTS; PR00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Transmembrane; Glycoprotein; Phosphorylation; Lipoprotein; Palmitate; Alternative splicing.
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SUBCELLULAR LOCATION: Integral membrane protein.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND
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European Bioinformatics Institute
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Query Match Best Local Matches

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01-APR-1990 (Rel. 1
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Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus
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                                                                                                                                                                                                                                                                                                                                                                                         or send an email to license@isb-sib.ch).
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-I- FUNCTION: MAY PLAY A ROLE IN THE REGULATION OF CALCIUM SEQUESTRATION OR RELEASE IN THE SR OF SKELETAL AND CAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Molecular cloning of a histidine-rich Ca2+-binding protein sarcoplasmic reticulum that contains highly conserved repeat
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852 AA;
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reticulum histidine-rich calcium-binding protein
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RA Langham S.-A., McGullagh B., Bilham L., Robben J.,

RA Van der Schweren J., Grymonprez B., Chuang Y.-J., Vandenbussche F.,

RA Van der Schweren J., Grymonprez B., Chuang Y.-J., Vandenbussche F.,

RA Waltzenegger T., Bothe G., Ramsperger U., Hilbert H., Braun M.,

RA Holzer E., Brandt A., Peters S., van Staveren M., Dirkse W.,

RA Mooijman P., Klein Lankhorst R., Rose M., Hauf J., Koetter P.,

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RA De Keyser A., Buysshaert C., Gielen J., Vilalarveel R., De Clearcq R.,

RA Clark L., Doggett J., Hall S., Kay M., Lennard N., McLay K., Mayes R.,

RA Clark L., Rajandream M.-A., Lyne M., Benes V., Rechmann S.,

RA Pettett A., Rajandream M.-A., Lyne M., Benes V., Rechmann S.,

RA Borkova D., Bloecker H., Scharfe M., Grimm M., Loehnert T.-H.,

RA Borkova D., Bloecker H., Scharfe M., Grimm M., Loehnert D., Herzl A.,

RA Borkova D., Bloecker H., Scharfe M., Grimm M., Debnert T.-H.,

RA Borkova D., Schmidt W., Lecharny A., Aubourg S.,

RA Ra Borkova D., Hiller R., Schmidt W., Lecharny A., Aubourg S.,

RA RA Schnabl S., Hiller R., Schmidt W., Lecharny A., Aubourg S.,

RA Glibbons T., Weber N., Vandenbol M., Bargues M., Terol J., Torres A.,

RA Perez-Perez A., Purnelle B., Bent E., Johnson S., Tacon D., Jesse T.,

RA Perez-Perez A., Purnelle B., Bent E., Stocker S.,

RA Heijnen L., Schwarz S., Scholler P., Heber S., Francs P., Blelke C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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Frishman D., Haase D., Lemcke K., Mewes H.-W., Stocker S., Zaccaria P., Bevan M., Wilson R.K., de la Bastide M., Habermann K. Parnell L., Dedhia N., Gnoj L., Schutz K., Huang E., Spiegel L., Sekhon M., Murray J., Sheet P., Cordes M., Abu-Threideh J., Stoneking T., Kalicki J., Graves T., Harmon G., Edwards J., Latreille P., Courtney L., Cloud J., Abbott A., Scott K., Johnson Minx P., Bentley D., Fulton B., Miller N., Greco T., Kemp K., Minx P., Bentley D., Fulton B., Miller N., Greco T., Kemp K., Nelson J., Spieth J., Mardis E., Dante M., Pepin K., Hillier L., Nelson J., Spieth J., Ryan E., Andrews S., Geisel C., Layman D., Du H., Ali J., Berghoff A., Jones K., Drone K., Cotton M., Joshu C., Antonoiu B., Zidanic M., Strong C., Sun H., Lamar B., Yordan C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mayer K.F.X., Schueller C., Wambutt R., Murphy G., Volckaert G., Pohl T., Duesterhoeft A., Stickema W., Entian K.-D., Terryn N., Harris B., Ansorge W., Brandt P., Grivell L.A., Rieger M., Weichselgartner M., de Simone V., Obermaier B., Mache R., Mueller M., Kreis M., Delseny M., Puigdomenech P., Watson M., Schmidtheini T., Poister M., Delseny M., Puigdomenech P., Watson M., Schmidtheini T., Poister M., Poister 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qin W., Pappan K., Wang X.;
"Molecular heterogeneity of phospholipase D (PLD). Cloning of PLDgamma and regulation of plant PLDgamma, -beta, and -alpha by polyphosphoinositides and calcium.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eu
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last seguence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Phospholipase D gamma 1 (EC 3.1.4.4) (AtPLDgamma1) (PLD gamma (Choline phosphatase) (Lipophosphodiesterase II) (Lecithinase PLDGAMMA1 OR ATGG1850 OR T26ML8.60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=98019191; PubMed=9353280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Reichert B., Portetelle D., Perez-Alonso M., Boutry M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=20083488; PubMed=10617198;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Columbia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wambutt R.,
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                                                 K., Cotton M., Joshu C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 core eudicots; Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6;
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                                                                                                                                                                                                                                                                                                                                                                Habermann K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bancroft I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
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Ma P., Zhong J., Preston R., Vil D., Shekher M., Matero A., Shah R. Swaby I.K., O'Shaughnessy A., Rodriguez M., Hoffman J., Till S., Granat S., Shohdy N., Hasegawa A., Hameed A., Lodhi M., Johnson A., Chen E., Marra M., Martienssen R., McCombie W.R.; "Sequence and analysis of chromosome 4 of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fan L., Zheng S., Cui D., Wang X.;

"Subcellular distribution and tissue expression of phospholipase
Dalpha, Dbeta, and Dgamma in Arabidopsis.";
Plant Physiol. 119:1371-1378(1999).

-!- FUNCTION: Hydrolyzes glycerol-phospholipids at the terminal
phosphodiesteric bond. Plays an important role in various cellular
processes, including phytohormone action, vesicular trafficking,
secretion, cytoskeletal arrangement, meiosis, tumor promotion,
pathogenesis, membrane deterioration and senescence. Can use
                                                                                                                                                            Pfam; PF00168; C2; 1.
Pfam; PF00614; PLDc; 2.
SMART; SM00239; C2; 1.
SMART; SM00155; PLDc; 2.
PROSITE; PS50004; C2_DOMAIN_2;
PROSITE; PS50035; PLD; 2.
                                                                                                                                                                                                                                                                                                        EMBL; AF027408; AAB87672.1; ALT_FRAME. EMBL; AL078606; CAB44323.1; -. EMBL; AL161532; CAB78228.1; -.
                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                                                                           Hydrolase; Lipid degradation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 402:769-777(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      thaliana."
                                                                     ACT_SITE
                                                                                          DOMAIN
                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                       InterPro; IPR000008; C2. InterPro; IPR001736; PLD.
                                                    ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: CONTAINS 1 C2 DOMAIN.

SIMILARITY: CONTAINS 2 PLD PHOSPHODIESTERASE DOMAINS.

SIMILARITY: CONTAINS 2 PLD PHOSPHODIESTERASE DOMAINS.

CAUTION: Ref.1 sequence differs from that shown due to frameshifts in position 60, 79, 260, 300, 465 and 758.

in position 60, 79, 260, 300, 465 and 758.

CAUTION: It is uncertain whether Met-1 or Met-11 is the initiator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OSMOTIC and salt stresses.

DOMAIN: C2 domain is a calcium-binding fold, and the binding promotes the protein association with membranes. In PLD gamm the calcium-coordinating acidic amino-acids are conserved.

SIMILARITY: Belongs to the phospholipase D family. C2-PLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found in chloroplast.
TISSUE SPECIFICITY: Highly expressed in roots
moderately in stems, leaves and seedlings and
                                                                                                                                                                                                                                                                                                                                                                                                                                    SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Enteropean Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              phosphatidate.

COFACTOR: Calcium. Requires micromolar level (PIP2-dependent).

ENZYME REGULATION: Inhibited by neomycin.

SUBCELLULAR LOCATION: Cytoplasmic and membrane-associated. Fou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATALYTIC ACTIVITY: A phosphatidylcholine + H(2)0 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INDUCTION: Activated by wounding, heavy metal, methyl salicylate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              detected in seeds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mainly associated with intracellular membranes but also with mitochondrial membranes, nuclei and clathrin-coated vesicles. Not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 substrates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             phosphatidylserine but prefers ethanolamine-containing lipids as
   29
364
704
369
371
376
709
                                                                                          399
731
PLD PHOSPHODIESTERASE 1.
PLD PHOSPHODIESTERASE 2.
POTENTIAL.
POTENTIAL.
POTENTIAL.
POTENTIAL.
POTENTIAL.
                                                                                                                           Calcium; Repeat; Multigene family. C2 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                  There are no restrictions ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                  Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                  by and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      In PLD gamma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in siliques. Not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                flowers,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shah R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Found
                                                                                                                                                                                                                                                                                                                                                                                                                  in no way
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RESULT 15 RS4_PSEAE

RS4_PSEAE

STANDARD;

PRT;

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В
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Best Local S
Matches 13
                                                    Matches
                                                                         Query Match
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CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                              Hypothetical
ZN_FING
ZN_FING
ZN_FING
NP_BIND
ADDMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _NEUCR
RNT1_NEUCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-2001
16-OCT-2001
16-OCT-2001
                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no will be a content in the statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                Schulte U., Aign V., Hoheisel J., Brandt P., Fartmann B
Nyakatura G., Mewes H.-W., Mannhaupt G.;
Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; F
Sordariales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Regulator of 2E4.130.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9HEH1;
                                                                                                    SEQUENCE
                                                                                                                                                                                              SMART;
                                                                                                                                                                                                                                                  EMBL; AL451022; CAC18314.1; -.
                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/

    -!- SUBCELLULAR LOCATION: Cytoplasmic (Potential).
    -!- SIMILARITY: BELONGS TO THE DNA2/NAM7 HELICASE FAMILY.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=74-OR23-1A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=5141;
528
                                                                                                                                                                                                                       InterPro; IPR003593; AAA_ATPase.
InterPro; IPR001410; DEAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50 EAKHLPNMDGFHNRLGGMLSGLGRKKVEGEKSSK 83
                                                               Local
                         1 RLEAKHRENVPG-----HERMGRGRTSSKEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 EAKHRENVPG-HERMG------RGRTSSK 24
                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: Eliminates
                                                                                                                                                                                                                                                                                                                                                                                                            (By similarity)
RLTAKSREDVESSVSFLALHEQV-RMNTTNKEL
                                                                                                                                                                                                 SM00382;
SM00487;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity
13; Conser
                                                  l Similarity
14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
s; Sordariaceae; Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     858
                                                                                                                  11 protein;
111 139
163 193
477 484
59 62
69 73
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114
370
377
634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 40, Created)
(Rel. 40, Last sequence update)
(Rel. 40, Last annotation updat
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                                                                                                                in; Hydrolase; Helicase; ATP-binding; Zinc-finger.
139 C2H2-TYPE (ATYPICAL) (POTENTIAL).
193 C4-TYPE (POTENTIAL).
484 ATP (POTENTIAL).
62 POLY-ASP.
73 POLY-ASP.
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MQ -> IE (IN REF. 1).

Q -> E (IN REF. 1).

A -> S (IN REF. 1).

MQ -> IE (IN REF. 1).
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                                                 Score 44; DB Pred. No. 1.1e 5; Mismatches
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                                                                                                     8B0E4F0407ACE142 CRC64;
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MBL outstation -
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Search completed: October 29, 2002, 13:58:30 Job time : 35 secs
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                                                                                                                                    Matches
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Best Local Similarity
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15-DEC-1998
16-OCT-2001
16-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteria; Proteobacteria; gamma subdivision; Pseudomonadaceae;
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RPSD OR PA4239
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InterPro; iPR001912; Ribosomal_S4.

InterPro; iPR002942; S4.

Pfam; pF011479; S4; 1.

Pfam; pF011479; S4; 1.

SMART; SM00363; S4; 1.

TIGRFAMS; TIGR01017; rpsD_bact; 1.

TROSSTE; pS00632; RIBOSOMAL_S4; 1.

RIBOSOMAL_S4; 1.

RIBOSOMAL_S4; 1.

SDLSAD -> NSSSVP (IN REF. 2).

SEQUENCE 206 AA; 23277 MW; DBDB5D0191723186 CRC64;
                                                                                                                                                                                                                                                                                                                                                                   EMBL;
EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BY SIMILARITY).
-!- SIMILARITY: CONTAINS 1 S4 RNA-BINDING DOMAIN.
-!- SIMILARITY: BELONGS TO THE S4P FAMILY OF RIBOSOMAL PROTEINS.
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                                                                                     LEAKHR-ENVPGHERMGRGRTS 22
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P81288; 1C
                                                                   LDSKCKAENVPGQHGQRRGRLS
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(Rel. 40,
(Rel. 40,
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Pred. No. 22
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2: sp_bacteria
3: sp_fungi:*
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Copyright (c) 1993 - 2002 Compugen
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         Q8xsz5 ralstonia s
Q9htu8 pseudomonas
Q95sf6 drosophila
Q9vi66 drosophila
Q9vi69 lactococcus
Q9xix9 oryza sativ
O74328 schizosacch
M02316 lentinula e
Q9v712 drosophila
Q8y4k8 anabaena sp
Q8y4k8 anabaena sp
Q8x546 oryza sativ
Q9k511 bacillus su
Q9k5k7 bacillus su
Q9k5k7 bacillus mo
Q8tf63 homo sapien
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Q97d15 clostridium	O44967 caenorhabdi	brucella			2 petrogale	-	5 petrogale				_		petrogale	petrogale	petrogale	macropus	P79187 macropus gi	Q9lc68 bacillus su	Q8r1p6 mus musculu	054170 streptomyce				cephal	Q9m3r3 pinus sylve	Q9ne31 leishmania	Q9jtb5 neisseria m	Q9jyd2 neisseria m

ALIGNMENTS

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RESULT 1

QXXSZS

AC QXXS

AC 
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DR InterPro; IPR002034; AIPM/Heit_synth.
InterPro; IPR002034; AIPM/Heit_synth.
InterPro; IPR00891; HMGL-like.
DR InterPro; IPR00891; HMGL-like; 1.
DR TICRFAMS; TICR00970; leuA_yeast; 1.
PROSITE; PS00815; AIPM_HOMOCIT_SYNTH_1; UNKNOWN_1.
DR PROSITE; PS00815; AIPM_HOMOCIT_SYNTH_2; UNKNOWN_1.
DR PROSITE; PS00815; AIPM_HOMOCIT_SYNTH_2; UNKNOWN_1.
SEQUENCE 576 AA; 63149 MW; BBCB0A9A66BA332B CRC64;
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Best Local S
Matches 12
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OBXSZ5

OBXSZ5;

O1-MAR-2002 (TrEMBLrel. 20, Created)

O1-MAR-2002 (TrEMBLrel. 20, Last sequence update)

O1-JUN-2002 (TrEMBLrel. 21, Last annotation update)

Probable 2-isopropylmalate synthase protein (EC 4.1.3.12).

LEUA2 OR RSP0322 OR RS05445.

LEUA2 OR RSP0322 OR PRODE A SOLUTION OF SOLUTION 
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             l Similarity
12; Conserv
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Score 55; DB 16; Length 576; Pred. No. 4.4; 3; Mismatches 12; Indels
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01-DEC-2001
01-DEC-2001
01-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 406:959-964(2000).

EMBL; AE004937; AAG08631.1; -.

InterPro; IPR003736; DUF157.

Pfam; PF02584; DUF157; 1.

TIGRFAMs; TIGR00369; unchar_dom_1; 1.

Hypothetical protein; Complete proteome.

SEQUENCE 157 AA; 17005 MW; 1002F16B858253A3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. STRAIN=ATCC 15692 MEDLINE=20437337;
            Nunoo J., Pacleb J., Paragas V., Park S., Phouanenavong S., Wan K., Yu C., Lewis S.E., Rubin G.M., Celniker S.; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AY060818; AAL28366.1; -.
                                                               STRAIN-BERKELEY;
Stapleton M., Brokstein P., Hong L., Agbayani A., Carlson J.,
Stapleton M., Chavez C., Dorsett V., Farfan D., Frise E., George R.,
Champe M., Chavez C., Liao G., Miranda A., Mungall C.J.,
Gonzalez M., Guarin H., Li P., Liao G., Miranda A., Mungall C.J.,
                                                                                                                                                                                                                                 GH28833p.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Proteobacteria;
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Ephydroidea; Drosophilidae;
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FlyBase;
                                                                                                                        SEQUENCE FROM N.A.
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Metazoa; Arthropoda; Tracheata;
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                                                                                                                                                                                                                                                                                                                                                                                                                                         38.9%;
                                                                                                                                                                Endopterygota; Diptera; Brachycera; Muscomorpha;
ilidae; Drosophila.
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                                                                                                                                                                                           Hexapoda; Insecta;
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                                                                                                                                                                                                                        RA Addams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Addams M.D., Celniker S.E., Kichards S., Ashburner M., Henderson S.N.,
RA Goorge R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.H.C., Blazej R.G., Champe M., Pfeliffer B.D.,
RA Ballew R.M., Basu A., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Ashburner M. R., Champe M., Pfeliffer B.D.,
RA Ballew R.M., Basu A., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Beseon K.Y., Benos P.V., Berman B.P., Brandari D., Bolshakov S.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gepablos B., Delcher A., Deng Z., Mays A.D., Dwl J., Dietz S.M.,
RA Goorge R.A., Butler H., Cadleu E., Center A., Chandra I.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Glan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Wei M.-H., Ibeyamm C.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshreii A.,
Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Rolliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Clibbs R.A., Myers E.W., Rubin G.M., Venter E., Shen G., Zhao Q., Zheng L.,
Ra Cheng X.H., Zhong F. M., Zhong W., Zhou X., Smith H.O.,
Ra Spier E., Stapler G. G. Drospothia melanogaster S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
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Best Local Similarity
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01-MAY-2000
01-MAY-2000
01-MAY-2000
                                                                                                                                                                         "The genome sequence of Drosophila Science 287:2185-2195(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20196006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CG2640
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                                                                                                                                                    EMBL; AE003672; AAF54059.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-BERKELEY;
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Pred. No. 9;
   Score 50.5;
Pred. No. 1
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                                                                                         59AE06D414EAAE1B CRC64;
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Q9XIX9;
01-NOV-1999 (TrEMBLrel. 12, Cre
01-NOV-1999 (TrEMBLrel. 12, Las
01-NOV-1999 (TrEMBLrel. 12, Las
Similar to Herpesvirus papio Bl
Oryza sativa (Rice).
Eukaryota; Viridiplantae; Strej
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01-JUN-2001
01-JUN-2001
01-MAR-2002
                                                                                                                                                                                                                   "Oryza sativa nipponbare(GA3) genomic DNA, chr clone:p0681F10.";
Submitted (APR-1999) to the EMBL/GenBank/DDBJ EMBL; AB026595; BAA81852.1;
SEQUENCE 838 AA; 92789 MW; 5E14371CB58B461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lactis ssp. lactis IL1403.";
Genome Res. 11:731-753(2001).
EMBL; AE006268; AAKO4411.1; -.
Hypothetical protein; Complete
SEQUENCE 72 AA; 8405 MW; CE
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                                                                                                                                                                                                                                                                                                                                                             STRAIN=CV. NIPPONBARE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Spermatophyta; Magnoliophyta; Ehrhartoideae; Oryzeae; Oryza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bolotin A., Wincker P., Mauger S., Jaillon O., Malarme K., Welssenbach J., Ehrlich S.D., Sorokin A.; "The complete genome sequence of the lactic acid bacterium Lactococcus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lactococcus lactis (subsp. lactis) (Streptococcus Bacteria; Firmicutes; Bacillus/Clostridium group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein YDBC OR LL0313.
                                                                                                                                                                                                                                                                                                                                          Sasaki T.,
                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=4530;
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                                  RTRAKGRERLTGRRGRGRGLSME
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12; Conser
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                                                                                                                                                                                                                                                                                                                                          Nagamura Y., Yamamoto K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 12, Last sequence update)
(TrEMBLrel. 12, Last annotation updat
Herpesvirus papio BRRF2 homolog gene.
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                                                                                                                           Conservative
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60.0%;
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                                                                                                                         Score 50; DB Pred. No. 40; 1; Mismatches
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2.8;
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Best Local S
Matches 12
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pfam; PF00628; PHD; 1.
smART; SM002249; PHD; 1.
Hypothetical protein.
SEQUENCE 424 AA; 46955 MW;
                                                                                                                                          Kondoh O., Muto A., Kajiwara S., Takagi J., Saito Y.
"A fruiting body-specific cDNA, mfbAc, from the mush
edodes encodes a high-molecular-weight cell-adhesion
containing an Arg-Gly-Asp motif.";
Gene 154:31-37(1995)
                                                                                                                                                                                                                                                                                                                                                                              Lentinula edodes (Shiitake mushroom) (Lentinus Eukaryota; Fungi; Basidiomycota; Hymenomycetes Agaricales; Tricholomataceae; Lentinula.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ol-JAN-1999 (TrEMBLrel. 09, Last sequence update)
Ol-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Mature fruiting body-specific cell-adhesion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q02316;
01-NOV-1996 (TrEMBLrel. 01,
01-JAN-1999 (TrEMBLrel. 09,
01-MAR-2002 (TrEMBLrel. 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1998 (TrEMBLrel. 08, Cr
01-NOV-1998 (TrEMBLrel. 08, La
01-MAR-2002 (TrEMBLrel. 20, La
Hypothetical 47.0 kDa protein
SPBC1685.08.
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EMBL; AL031154; CAA20056.1; -.
EMBL; AB027769; BAA87073.1; -.
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074328; Q9USG2;
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                                                                                                                                                                                                                                                                                       STRAIN-FMC2;
                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A., AND SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=5353;
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                                                                    FUNCTION: MAY PLAY A ROLE IN CELL ADHESION.
TISSUE SPECIFICITY: FRUITING BODY-SPECIFIC. H
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EXPRESSION IN THE GILLS.
DEVELOPMENTAL STAGE: EXPRESSION
DETECTABLE IN IMMATURE FRUITING
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to the EMBL/GenBank/DDBJ databases
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                          Ballew R. M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Charry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Charry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Charry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Charry J.M., Cawley S., Dahlke C., Davenport I.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Deptiel J.B., Davies M., Glasser K.,
RA Dodson K.J., Evangelista C.C., Ferrac C., Ferriera S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegvam C.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegvam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lái Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lái Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lái Z.,
RA Mount S.M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Rainert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Reinert K., Saunders R.D.C., Scheeler F., Shen H.,
RA Shen R. C., Sidenson D. S., Sauth T. S.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Wan J.F., Agbayani A., An H. J., Andrews-Pfannkoch C., Baldwin D., Abill J.F., Agbayani A., An H. J., Andrews-Pfannkoch C., Baldwin D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TREMBLRel. 13, 01-MAY-2000 (TREMBLRel. 13, 01-JUN-2002 (TREMBLRel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001214; SET.
InterPro; IPR001965; Znf_PHD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: CONTAINS 1 'S
EMBL; D14487; BAA18903.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-BERKELEY;
MEDLINE=20196006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CG13941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159
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11 adhesion.

14 376

19 795

2140 AA; 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; PF00628; PHD; 1.
1; PF00856; SET; 1.
2T; SM00249; PHD; 1.
2T; SM00317; SET; 1.
                B.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EAKHRENVPGH-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EAKDKENLPDHWWCWECDPSLLERIDREKARSLQIA 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
Siden-Kiamos I., Simpson Spradling A.C., Stapleton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
548
797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35.4%;
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Simpson M., tapleton M.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
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Pred. No. 1
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SET DOMAIN.
CELL ATTACHMENT SITE (
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7;
  Strong
  Skupski M.P., Strong R., Sun
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CRC64;
                                                                                                                                                                                                                                                                                                                                                                    Chandra I.,
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RESULT
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Q8YQK8
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Best Local
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EMBL; AP003594; BAB75514.1; -.

EMBL; AP003594; BAB75514.1; -.

InterPro; IPR001300; Protease_C2.

InterPro; IPR001300; Protease_C2.
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EMBL; AE003815, AAF58254.1; -.
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Science 287:410
Science 287:410
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Science 287:410
EMBL; AE003815; AAF58254...,
ElyBase; FBgn0033928; CG13941.
ElyBase; FBgn0033928; CG13941.
ElyBase; FBgn0013928; CG
                                                         Q8SB46;
01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00648; Peptidase_C2; 1.
SMART; SM00230; CysPc; 1.
PROSITE; PS00018; EF_HAND; UNKNOWN_1.
Hypothetical protein; Complete proteol
SEQUENCE 829 AA; 89203 MW; 8B2D09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe A., Iriguchi M., Ishikaw
Kishida Y., Kohara M., Matsumoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anabaena sp. (strain PCC 7120).
Bacteria; Cyanobacteria; Nostocales;
                                                                                                                                                                                             Q8SB46
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Yasuda M., Tabata S.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162 MQPKYRESIPRHEVKTFRELLDRGRT 187
                                                                                                                                                                                                                                                                                                                                                            704 RENTPGYNLIGNGDTLNRPL 723
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                                                                                                                                                                                                PRELIMINARY;
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Iriguchi M.,
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45.0%;
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Pred. No.
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8B2D095E273lAE33 CRC64;
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M., Takazawa M., Yamada M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence update)
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Putative polyprotein. OSJNBB0091009.13.

21, 21, 21,

Created)

Last sequence update)
Last annotation update)

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RESULT 12
Q9K5L1
       RESULT 13
Q9K5K7
ID Q9K5K
AC Q9K5K
DT 01-OC
DT 01-OC
DT 01-MA
DE COMP.
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Best Local
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QMK5L1;
01-CCT-2000 (TrEMBLrel. 15,
01-CCT-2000 (TrEMBLrel. 15,
                                                 Q9K5K7;
Q9K5K7;
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza sativa (Rice).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoldeae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

Wing R.A., Yu Y., Soderlund C., Chen M., Kim H.-R., Ramb
Saski C., Henry D., Oates R., Simmons J.;

"Rice Genomic Sequence.";
Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AC091732; AAL77162.1; -.
                                  01-OCT-2000 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                         Pfam; PF02518; HATPase_c; 1.

Pfam; PF00595; PD2; 1.

SMART; SM00387; HATPase_c; 1.

SMART; SM00228; PD2; 1.
                                                                                                                                                                                                                                                                                                                                                                                             quorum-sensing system.";
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AV003900; AAF82174.1;
InterPro; IPR003594; ATPbind_ATPase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacillus subtilis.
Bacteria; Firmicutes; Bacillus/Clostridium group; Bacillales;
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       Bacillus mojavensis
                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-RS-B-
                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR004359; HIS_KIN_sig.
InterPro; IPR001478; PDZ.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID-1423;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             107 AKHNMAVPYHPQTSGRAETSNKQI 130
                                                                                                                                                                 645 KLVAQQQERVPFHIRLNTGRFTASLDL 671
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                                                                                                                                                                                                                                      Local Similarity
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                                                                                                                                                                                                                                                                               765 AA;
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                                                                                                                                                                                                                         Conservative
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                                                                                           PRELIMINARY;
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88476 MW; 8118331678A6AC83 CRC64;
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                                  Created)
Last sequence update)
Last annotation updat
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Last annotation update)
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Pred. No. 3
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Pred. No. 6
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Best Local S
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Best Local :
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01-JUN-2002
01-JUN-2002
O94827 PRELIMINARY; PRT; 864 AA.
O94827;
O1-MAY-1999 (TrEMBLrel. 10, Created)
O1-MAY-1999 (TrEMBLrel. 11, Last sequence update)
O1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
KIAA0720 protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q8TF63;
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SMART; SM00388; HiSKA; 1.
SMART; SM00228; PDZ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       quorum-sensing system."; submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases EMBL; AY003901; AAF82178.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Firmicutes; Bacillus/Clostridium group; Bacillales;
Bacillaceae; Bacillus.
NCBI_TaxID=72360;
                                                                                                                                                                                                                                                                               "Identification and Immunocytochemical Analysis of DCNP1, a Dendritic Cell-Associated Nuclear Protein.", Estochem. Biophys. Res. Commun. 290:1022-1029(2002).
EMBL; AB074498; BAB84585.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Specificity and genetic polymorphism of the Bacillus competence
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                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                       MEDLINE=21656978; PubMed=11798177;
Masuda M., Senju S., Fujii S., Terasaki Y., Takeya M., Hashimoto S.,
Matsushima K., Yumoto E., Nishimura Y.;
                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                                                                                                                                                   18 ETVPGHQRLERG 29
                                                                                                                                                                                                           Local Similarity 66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RLEAKHRENVPGHERMGRGR-TSSKEL 26 :| |: :| || || || :| :| :|
                                                                                                                                                                                8 ENVPGHERMGRG 19
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12; Conserv
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IPR003661; His_kinA.
IPR004359; HIS_KIN_sig.
IPR001478; PDZ.
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Last annotation update)
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                                                                                                                                                                                                                         Score 48;
Pred. No.
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Pred. No. 6
                                                                                                                                                                                                                                                                    803125CEFA61B9F8 CRC64;
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Euteleostomi;

Length 765;

Indels

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RC TISSUB-BRAIN;

RX MEDLINE-99087487; PubMed=9872452;

RX MEDLINE-99087487; PubMed=9872452;

RX MEDLINE-99087487; PubMed=9872452;

RX MEDLINE-99087487; PubMed=9872452;

RA MEDLINE-99087487; PubMed=9872452;

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

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RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

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RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-9908748 A., Suyama M., Kikuno R., Miyajima N., Tanaka A.,

RA MEDLINE-908748 A., Suyama M., Kikuno R., Miyajima N., Kikuno R., Miyajima N., Miyajim
                                                                                                                                                                                                                                                                                                                                Query Match 34.3%;
Best Local Similarity 40.0%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50003; PH_DOMAIN; 1.
NON_TER 1 1
SEQUENCE 864 AA; 95282 MW;
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Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                1 RLEAKHRENVPGHERMGRGRTSSKE 25
||| || : |||: | : :|
173 RLEDSWRELIDGHEKLTRRQCHQQE 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         864 AA; 95282 MW; 1EA2E7DB43E595D7 CRC64;
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